

Historic, Archive Document

Do not assume content reflects current
scientific knowledge, policies, or practices.

Dec. 1899 23/3

VICK'S

RECEIVED
★ DEC 28 1899 ★
U. S. Department of Agriculture.

MAGAZINE

ILLUSTRATED
MONTHLY



DECEMBER, 1899.

VICK
PUBLISHING Co
ROCHESTER, N.Y.

VICK'S ILLUSTRATED MONTHLY.... MAGAZINE

Entered as second-class mail matter in the post-office at Rochester, N. Y.

MANAGING EDITOR, - - - - - JAMES VICK.

EDITOR - - - - - CHARLES W. SEELYE.

ASSOCIATE EDITOR, - - - FLORENCE BECKWITH.

SPECIAL CORRESPONDENTS

MISS L. GREENLEE.

ELIAS A. LONG.

E. S. GILBERT.

VICK'S ILLUSTRATED MAGAZINE is published at the following rates, either for old or new subscribers: One copy, one year, in advance, Fifty cents. A club of five or more copies ordered at one time, \$2.00, *without premium*. To foreign countries, twenty-four cents extra for postage.

Address all communications in regard to subscriptions, advertising, and other business, to

VICK PUBLISHING COMPANY, TRIANGLE BUILDING, ROCHESTER, N. Y.

JAMES VICK, President.

F. H. BEACH, Vice-president.

F. H. BEACH, Jr., Secretary and Treasurer.

DECEMBER CONTENTS.

Frontispiece—Colored Plate, *Cypripedium spectabile*.

Illustrations in Black and White.

A Vase of Asters Gracefully Arranged, 65; A Graceful Arrangement of Asters, 66; A Good Arrangement of Pansies and other Small Flowers and Ferns, 66; Golden Rod Well Arranged, 67; Proper Arrangement of Geraniums, 68; Faulty Arrangement of Geraniums, 68; *Dichorisandra thyrsiflora*, 69; *Schismatoglottis crispata*, 71; Variegated-leaved Pineapple, 73; A Bed of Souper Roses, 75; The Crimson Rambler in Tree Form, 77; Flower Garden on a Rock Ledge, 81; *Lilium Sutchuenense*, 83; Greenhouse Bench Arranged for Sub-watering, 84; A Comparison of Radishes from Surface-watered and Sub-watered Benches, 85; "The Borders were Sweet with Alyssum," 86; An Indoor Grove of *Araucarias* or Christmas Trees, 89; A Bench of Foliage Plants, 90; The Crow, 91; Crow's Egg, 91; Crow's Nest, 92.

Editorial and Communications.

The Arrangement of Flowers (illustrated) . . . 65
Some More Satisfactory Plants . . . 66
The Lemon Lily . . . 68
A Satisfactory House Plant—*Dichorisandra* (illustrated) . . . 69
Centaurea Marguerite . . . 70
Some Good Window Gardens (illustrated) . . . 71
Winter Greenery . . . 72

Gleanings From Many Fields.

What the Plant Doctor Said . . . 74
Souper-Roses (illustrated) . . . 75
Christmas Plums . . . 76
Daphne cneorum . . . 76
Crimson Rambler in Tree Form (illustrated) . . . 77
Salvia Splendens "Silverspot" . . . 77
Santa Claus . . . 78
Lilium rubellum . . . 78
Wintering *Crinum ornatum* . . . 78
The San José Scale . . . 79
Cypripedium spectabile (colored plate) . . . 79
Sugar Beets in 1898 . . . 80
The Tiger Lily . . . 80
Bulbs in the South Atlantic States . . . 80
How to Freshen *Chrysanthemum* Flowers . . . 80
Making Waste Land Bloom (illustrated) . . . 81

Flowers for Sale . . . 82
Perennial Phlox and *Phlox subulata* . . . 82
A New Stock for the Lilac . . . 82
A New Species of Lily (illustrated) . . . 83
Japanese Gardening at Paris . . . 83
Sub-watering for Radishes (illustrated) . . . 84
Callirhoe involucrata . . . 84
Notes from an Oregon Garden . . . 85
Some Texas Notes . . . 85
A Garden Paper . . . 86
Wintering Celery . . . 86
Beauty by Accident . . . 86
Back Yard Flower Garden (illustrated) . . . 86
Corn Products . . . 86
An Apple Crop . . . 86
Mr. F. W. Loudon, the Fruit Originator . . . 87
Fall and Winter Work Against Injurious Insects . . . 87
Apple Storage . . . 87
Campbell's Early Grape . . . 87
New Way of Packing Fruits . . . 88
Likes the Colored Plate . . . 88
Cement for the Borers . . . 88
Propagating Japan Quince . . . 88
Storing Tender Water Lilies . . . 88
Cover the Bulb Beds . . . 88

Bud, Bloom and Seed Pod . . . 89-90

Nature Studies for Young People.

Our Black-coated Neighbor (illustrated) . . . 91
Seeing Without Eyes . . . 93

Letter Box . . . 94

Mildew on Roses; Purple Dahlias; A Basketful of Fresh Eggs; Rose and Lily Troubles; A Grati-fying Letter.


Family Cozy Corner . . . 95

Some Plants I Have Seen; Climbers in a Cold Climate; Enthusiasm all Aglow; Wintering Cannas.


Editor's Notes . . . 96

California Walnuts; Francis William Loudon; Peter M. Gideon; Memorial of Joseph Albert Lintner, Ph. D.; Violet Culture; Meetings of Horticultural Societies; *Chrysanthemum* Exhibits.

Please notice the address on the wrapper or envelope of your Magazine.

If there is a  near your name it indicates that your subscription has expired, and to keep your files complete should be renewed at once.

It is important that your subscriptions be renewed promptly, as often it is impossible to furnish back numbers.

The  on wrapper means your Subscription has Expired



CYPRIPEDIUM SPECTABILE.

VICK'S ILLUSTRATED MAGAZINE

VOLUME XXIII.
SERIES III, VOL. I.

DECEMBER, 1899

No. CCLXIV.
No. III.

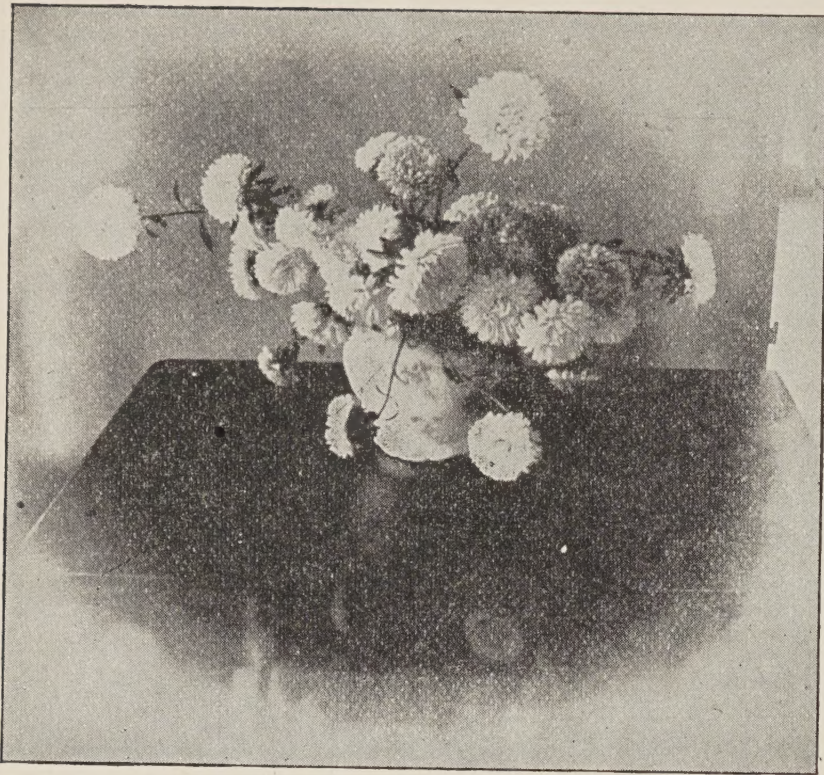


A VASE OF ASTERS GRACEFULLY ARRANGED

THE ARRANGEMENT OF FLOWERS.

THE first thing to consider is the receptacle; for no matter how beautiful the flowers or how nicely arranged, if the dish is not suitable in size, or shape, or color, the effect will not be what is desired. As a rule, an ornamented vase is not suitable as a flower holder, because it diverts attention from the flowers. If flowers are to ornament a given space, they should be so arranged as to be the principal object to attract the eye. A glass dish or holder is the most suitable thing for

the purpose. It is not itself noticeable, yet it is clear and sparkling, suggestive of water, and the stems and leaves show through it beautifully. White china, of course, harmonizes with anything. A common small brown crock has shown its beauty when filled with nasturtiums, and a brown bean jar is a delight to the eye filled with autumn leaves, golden-rod, or branches of sumach. The yellows, reds and greens contrast beautifully with its glossy brown, and reflect their colors in its



A GRACEFUL ARRANGEMENT OF ASTERS

sides, while white is too pale for these glowing beauties; but fill a white bowl with bachelor's buttons, pink roses, or other flowers of delicate color, and how it brings out and heightens their beauty!

As to the arrangement, study nature. Nature never crowds her flowers, or crushes the petals together. In what does the beauty of a cluster of geraniums consist? Is it in the color alone? Then cut some clusters of bloom and crowd them down in a vase till only the color shows, as we frequently see them. A piece of red cloth would look as pretty! But now take a cluster out and look at it. On the end of the stem little pedicels branch out like the wires of a fairy's umbrella, and each of these bears a flower, the cover of the umbrella. Do not let all this beauty of stem and joining be lost. Now we have decided not to crowd our geraniums down into the vase, let us not go to the other extreme and try to make them trail about and look graceful. They are still sturdy little flower clusters, each with a strong handle for the fairy to carry it by. Arrange some green leaves loosely about the top of your vase, and stand your flowers up above. But when you arrange roses let them droop and lean to

their hearts content. Cut a rose with its stalk and you will see that the leaves are set around the stem in such a manner as to give each flower a background of green. Let the leaves remain and thrust the stems into a bowl and they will arrange themselves.

Pansies, on the other hand, grow in flat little tufts. Trail maidenhair fern over the top and sides of either a flat dish or a flaring vase with a slender stem. Among these insert pansies, violets, alyssum, or other low-growing, dainty flowers. Here you will have about as near nature's arrangement as it is possible to get. The ferns will serve to hold the flowers gently in place and obviate any necessity for strings or wire frames. The whole secret is, "Study nature."

LILLIAN G. BARKER.

* * *

SOME MORE SATISFACTORY PLANTS.

PLUMBAGO CAPENSIS ALBA.—This is not a plant of recent introduction, but it is not the less valuable on that account, rather the more desirable as having stood the test of time. A plumbago was given a sunny corner of our veranda, a pot of rich friable soil, and a moderate supply of water. From a tiny plant in June, it has become a mass of delicate, shapely foliage, each spray tipped with large, loose clusters of snowy phlox-like blossoms. We have been careful to induce a dense growth of blooming points by careful pinching, to which this plant responds charmingly. The blue



A GOOD ARRANGEMENT OF PANSIES AND OTHER SMALL FLOWERS AND FERNS

variety, *P. capensis*, is no less beautiful and desirable, and is as easy of culture. Its rare, clear blue color, so seldom seen in our window plants is an added charm.

PASSIFLORA PFORDTII.—There is something about a *Passiflora* which draws attention again and again, but its charm is not easy to analyze. Perhaps it lies in the oddity of the flower, its unusual colors, and their more unusual combination. Perhaps the name has something to do with it; and a plant of climb-

been instantly smitten with a determination to own one similar, but in most cases they have been deterred by finding them somewhat expensive. Ours has not seemed to like too much strong sunshine, so we have kept it on the edge of our fern-jungle, where the sunlight is somewhat tempered. There in very rich, loose earth it has been thriving finely. It does not require an overabundance of water, we find. Lately it has taken on a rusty look, as if its dark-green suit was getting quite too



GOLDEN ROD WELL ARRANGED

ing habit always seems more interesting than others. At any rate, our *P. Pfordtii* has won its full share of admiration this summer. Its habit is good, its foliage attractive, it blooms when very small, unlike most other *passifloras*, and the flower is lovely and indescribable. The plant requires support as soon as the second pair of leaves is formed.

ARAUCARIA.—One of the gems of our collection this summer has been a small *araucaria*. Very few who have admired it had ever seen one before, and every one who has seen it has

shabby for further wear, and now it is pushing out another tier of lively green tassels, as well as showing fresh green tips at every point. It is interesting to know that the *araucaria* is a member of an ancient and aristocratic family, beside whose lineage that of a Chinese emperor is as the life of an ephemera to that of a glib-tongued parrot, a century or two old. The family records of the *araucaria* begin away back in the geological strata, and there is no hiatus in the line of descent. A royal inmate for our conservatories, is it not?



PROPER ARRANGEMENT OF GERANIUMS

TWO BEGONIAS.—Two fine companion plants have been a *Begonia rubra* and *Begonia President Carnot*. Somewhat similar in habit of growth, strong and vigorous, and each highly ornamental by itself, the shining, bright green leaves of *rubra* have found their complement of beauty in the rich foliage of *President Carnot*, beautifully spotted above, metallic-red below. Both are lovely in bloom, *rubra* excelling in this respect. Rich, friable soil, partial shade, equable temperature, and just enough moisture, and *rubra* cannot be excelled, we think. *President Carnot* at its best, however, comes in a rather close second. And, after all, what large, vigorous, well-grown begonia is not as near perfect as a plant can be.

SANSEVIERA ZEALANICA.—This is a plant that will live and grow almost anywhere, While it responds to generous treatment, as does any right-minded plant, still it will exist under circumstances that would cause a geranium to commit suicide. (They do it sometimes, you know, else how can we account for the loss of those that have "received every care" from their fond guardians?) The one thing that will cause a *sansevieria* eventually to succumb, is conscientious and unflagging deluging with water, and such is the devotion of tender womanhood to these children of Nature, that this result is now and then attained.

We give our *sansevieria* place with the palms, *aspidistras*, etc., and prize it very

highly. It has a commendable habit of creeping along under ground to surprise its owner with lusty shoots thrown up at a distance from the stem, so it is potted generously in light, rich soil, and is watered very sparingly.

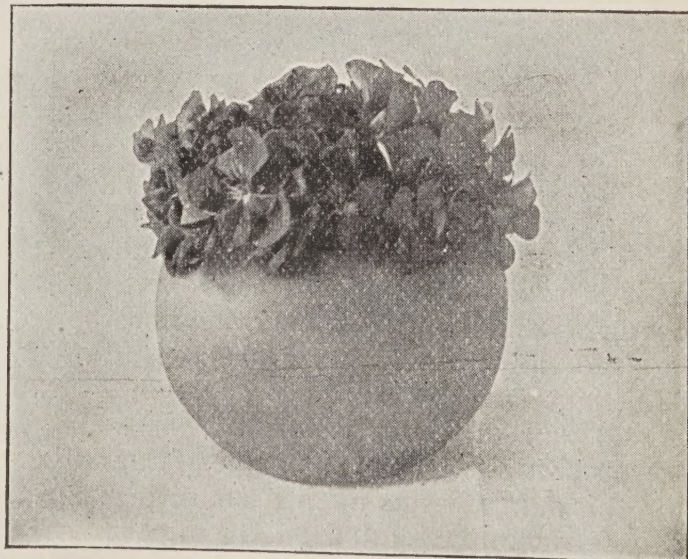
ASPARAGUS SPRENGERI.—While less beautiful, useful and desirable than *A. tenuissimus*, this plant has a distinctive grace and airiness of its own. It thrives well under conditions which suit *A. tenuissimus*, and is a thrifty and rapid grower. It is less useful than *A. plumosus* for floral work, and less striking as a pot plant, but the two together form very fine companion plants.

JUSTICIAS.—These are plants of upright, shrubby, vigorous growth, delighting in sunlight and moisture, when the two are applied together, and very free and persistent in bloom. *J. carnea* has large clusters of pink tassels; *J. sanguinea* bears dark red flowers. Both have fine velvety foliage. The newer varieties are dwarfer and on this account more popular.

MRS. W. A. CUTTING.

* *

THE Lemon Lily (*Hemerocallis flava*) is recommended as a window plant. Take up a small bunch of the roots, place in a box or pot in the cellar for about three weeks, then remove to a moderately warm room and water freely. The delicate yellow of the blossoms and their agreeable odor make it a very attractive plant.



FAULTY ARRANGEMENT OF GERANIUMS

A SATISFACTORY HOUSE PLANT — DICHORISANDRA.

I WISH there were some common name for the handsome blue-flowered plant which is pictured against a background of *Cycas*. It is a tropical plant of very distinct appearance, and once seen is not easily forgotten. From the picture one would imagine that it is a dwarf plant well clothed with foliage to the base of the stem, but this is not so. *Dichorisandra thyrsiflora* grows about six feet high and

ing the last four years I have often observed a fine plant of this species at the Sage Conservatories, Cornell University. It has usually occupied a dark corner in a tropical house, has never required any special care, and can be depended upon every year to produce its panicle of charming flowers. Blue is supposed to be nature's latest achievement in the evolution of color in flowers. At any rate it is a



DICHORISANDRA THYRSIFLORA

has a bare, unbranched stem with a cluster of about eight leaves near the top. Though far from the gardener's ideal of a compact, much-branched bush entirely covered with foliage, it is, nevertheless, an interesting and satisfactory plant. It is entirely willing to be crowded into the background where its bare stem does not show, and where the foliage of lower plants carries the eye up a wall of green to the *dichorisandra's* towering thyrses of blue. Dur-

ing the last four years I have often observed a fine plant of this species at the Sage Conservatories, Cornell University. It has usually occupied a dark corner in a tropical house, has never required any special care, and can be depended upon every year to produce its panicle of charming flowers. Blue is supposed to be nature's latest achievement in the evolution of color in flowers. At any rate it is a

has a bare, unbranched stem with a cluster of about eight leaves near the top. Though far from the gardener's ideal of a compact, much-branched bush entirely covered with foliage, it is, nevertheless, an interesting and satisfactory plant. It is entirely willing to be crowded into the background where its bare stem does not show, and where the foliage of lower plants carries the eye up a wall of green to the *dichorisandra's* towering thyrses of blue. During the last four years I have often observed a fine plant of this species at the Sage Conservatories, Cornell University. It has usually occupied a dark corner in a tropical house, has never required any special care, and can be depended upon every year to produce its panicle of charming flowers. Blue is supposed to be nature's latest achievement in the evolution of color in flowers. At any rate it is a

of difference from the plants that one sees everywhere. It is true that the stem is bare, but it is none the less curious and interesting. The stem is of herbaceous texture, densely and beautifully mottled with white specks, and has soft and fleshy bracts which sheathe the joints. The stem dies down after flowering, and the next year a new stem is sent up from another place.

The family to which *dichorisandra* belongs is an interesting one—the *Commelinaceæ*. The only representatives of it that are at all familiar in cultivation are the two kinds of Wandering Jew, one of which is a *tradescantia*, while the other really belongs to the genus *Zebrina*, as Prof. Bailey has lately discovered. Our native "Blue-eyed Mary" or common spiderwort, *Tradescantia Virginica*, is sometimes cultivated in the hardy borders, and has a white-flowered variety. Very rarely one sees in the border of a lover of hardy native plants some species of *commelina*, the typical genus of the family. Linnæus used to do some daring things in the naming of his plants, and *commelina* is a laughable case. There were three Dutch brothers named Commelin whom Linnæus knew, and two of them wrote a quaint old botanical book which I once had the pleasure of turning over at the Gray Herbarium. Apparently these two brothers were useful and productive citizens, while the other was not highly esteemed by Linnæus, for the great founder of modern botany has taken a subtle but unmistakable way of expressing his disapproval of the third brother. The plant that is named after the three brothers has three petals, two of which are plump and fair to see, being a delicate light blue, while the third petal is scarcely seen at the first glance, being smaller, and white or colorless. This colorless little petal is supposed to represent the brother whom Linnæus held in disdain. The comparison goes even farther, for the capsule has three cells, and two of them bear two seeds each, while the third has only one seed, or is quite abortive. These *commelinas* are sometimes called "day-flowers," and they are well worth cultivating. The light blue of their flowers is very pretty. Two of them are slender, trailing plants and strike root from the joints of their stems. None of the plants mentioned, however, has as dark a blue in the flower as *Dichorisandra thyrsiflora*.

There are other species of *dichorisandra* that are sometimes cultivated in choice collections. Two of them are grown in America for their variegated foliage, *D. mosaica* being probably the better kind. It is a dwarf-growing plant with beautiful checkered foliage and cannot be relied upon for flowering as regularly as the subject of the present sketch.

Mr. Robert Shore, gardener at Sage Conservatories has kindly given me the cultural points about *Dichorisandra thyrsiflora*. He has found it a satisfactory plant requiring no special degree of care nor any kind of treatment different from that which its companions receive in a tropical house. The soil is an ordinary potting soil, mostly loam. Mr. Shore always gives all his plants abundant drainage. The *dichorisandra* needs plenty of water during the winter, which is its growing season, and after flowering the water should be gradually withheld. The specimen figured has remained in an eight-inch pot two years without repotting. When a young plant is received it will have to be repotted occasionally during the first few years according to its needs. After it has attained a certain size and strength it may be depended upon to throw up a new stem each year and produce its flowers. At the time of writing, this plant has remained on dress parade for over a month. Each one of the pedicels has borne five or more flowers. The flowers open one by one on each pedicel and drop away silently, leaving nothing unsightly behind. The succession is perfect. Always flowers and buds at the same time, and as fresh and attractive to-day as a month ago.

The accompanying picture is from a photograph made by Mr. William C. Baker, taken from Mr. Shore's plant at the Sage Conservatories.

WILHELM MILLER.

Ithaca, N. Y.

CENTAUREA MARGUERITE.

Seeds of this *centaurea* were received and planted on the 3rd of April. Some in a box in the house and some a garden bed. They came up simultaneously, and those in the box were transplanted to the row in the garden when very small.

The plants endured storms of rain, hail, snow and frosts without injury. They grew in spite of the bitter drouth that prevailed, and July 2nd I found the first blossom open, a great fluffy, snow-white flower on a nodding stem, with a delicate, pleasant odor,—a thing of dainty beauty and fairy-like grace.

Then came the last test; and when a flower had been found to keep perfect in water for a week after cutting, no fault could be found. And as I write this, September 4th, I look from my window and see the same row of *Centaureas* still a mass of snowy bloom, and heavy with buds, and I am sure hundreds of the blossoms have been cut, for nothing is prettier in bouquets or for corsage flowers.

EMMA B. FRENCH.



SCHISMATOGLOTTIS CRISPATA

SOME GOOD WINDOW GARDENS.

THE good cheer of Christmas is best expressed in the scarlet-flowered and bright-berried plants that are now being coaxed into fullest beauty for holiday decorations. Why cannot we keep the mistletoe's milky berries for Easter to go along with Easter's white flowers?

Not far away from the window beside which I write is one of the brightest, bloomiest winter gardens that I know. It is tended by a young girl of seventeen, and often during these short, dark winter days I see her fresh young face bending over it.

Geraniums take up quite a good share of room in this window-garden. They kept gay the garden beds outside until near the last of September. Then they were carefully potted in ordinary garden soil, thoroughly watered, and set on the porch in partial shade for about three weeks, whence their mistress took them to their post of duty in the window. Judging from the buds I see, there should be a good display of the "own geranium's red" by Christmas time.

Every plant in this quartette of windows was grown either from seeds or cuttings by

their owner. A story that she loves to tell visitors is how she grew her one beautiful palm from seed. How the plump, heavy brown nut sprouted "after I had waited 'ages,' and thought it surely must have decayed. The leaves did not look like a palm's at all at first, and I thought it must be a fraud." Then it slowly grew from a tiny seedling in a two-inch pot to a fine, plummy-fronded specimen. The health and vigor of this palm attract much attention, and I am reminded that the few seedling palms I have seen grown by amateurs have been the freshest and finest of any that I find in such collections. It may be a case of the tiny seedling's growing to fit the conditions under which it germinated.

A number of begonias grace this window garden; an othonna, graceful as a waterfall; a cactus, straight, stiff as a post and about six feet tall; and perhaps a score of other plants.

Some tradescantias are wandering all along the shelves and down over the sides of the pots, draping them gracefully with green and white and crimson. They were planted in small pots of common garden soil last June, with the intent of keeping their leaf variega-

tion bright. In rich soil tradescantias are apt to revert to the old plain green type. Further drapery is furnished by a German ivy, some nasturtiums and some morning-glories. The ivy was indulged in richer soil than the Wandering Jew, and was given more pot room. Both spent the summer on the veranda railing.

The nasturtiums seem to think it but a frolic to furnish flowers all winter. They grew from cuttings taken from a vase which was filled with branches in full flower just before hard frosts came on. Their owner was surprised to find that these branches had formed clusters of white roots in the water of the vase, so she potted and promoted these "volunteers" to her window garden. Such picturesque, breezy flowers are especially welcome in winter.

The morning-glories came from seeds scattered in different pots and left to take care of themselves. Readers of our cherished Vick's would think this a new race of dwarf morning-glories could they see the plants in bloom. They do not grow more than two or three feet high in this window, and some of them bloom when only about four inches in growth.

Nearly every Christmas two or three new plants appear in this window as the gift of friends. One that interested me very much was a beautiful little variegated pine-apple, with glossy, curling leaves of green and white, topped with an unfolding tip of bright pink. It is used often as a center table decoration, is

loaned to friends, and knocked about quite a deal, yet it seems to grow along thriftily in its dainty, jaunty way, as if no change of temperature or lack of care could daunt it.

A rarer plant with a longer name was *Schismatoglottis crispata*, with thick, leathery leaves like a rubber plant, embroidered with bold splashes of silver through the center. The little window gardener quaked for some time lest this exquisite exotic should droop under the ordinary conditions at her command, but she gave it her warmest nook, and frequent syringings with warm water, which, so far, have kept it so handsome and fresh as to attract much attention. A few days ago when a new leaf began to uncurl she drew a long sigh of relief and pleasure.

I have often heard it said that nice plants could not be grown in a house heated by a furnace, but this room has furnace heat. The temperature is kept up to about seventy degrees from eight in the morning until ten or eleven at night.

Many of the pots are set in swinging brackets that can be turned away from the window on cold nights, or during dark days when the occupants of the room wish more light.

The sunniest places just now are filled with red-berried ardisias and solanums, an otaheite orange with cunning yellow fruits, a little dwarfed holly with scarlet berries, and some crimson roses and carnations. L. GREENLEE.

WINTER GREENERY.

WHAT a blessed color green is in the cheerlessness and blackness of winter. It is the color of memory, for it recalls more than any other hue the pleasures of the summer, the wide, verdant fields, the leafy branches, the patch of velvety moss where our feet sank as they now sink in the soft white rug which has taken its place. A fine palm, a rubber plant, a sansevieria, seem more decorative in winter than the choicest bric-a-brac, while a Boston fern standing on a corner bracket and throwing out its graceful fronds like green spray from some unseen fountain is such a subtle reminder of spring that one hears the brook's flow, the waterfall's music, and feels the soft warm breezes.

Practically there is nothing in nature's greenery so useful, as well as beautiful, for all purposes as ferns. Their exquisite coloring and graceful delicacy of shape invest them with all the charm without the fragility of flowers. Given a handful of ferns, and no matter how great the paucity of blossoms, with just a single rose, for instance, an arrangement for table or mantel can be made which

will have more charm than a crowded bouquet which does not admit of the display of the flower's perfect contour. Then, ferns have such delightful possibilities for table decoration, they are so refined, dainty, enlivening, and contrast so beautifully with snowy linen, bright silver and sparkling glass.

The green of the feathery asparagus, in its three varieties, is almost as beautiful for this purpose, and for room decoration, especially as it endures the dry atmosphere of the house without murmur and goes right on growing under the most adverse conditions, but becomes a thing of rare beauty when treated with consideration; when the dust is shaken off, enough water given it, and an occasional bath. The character of flowers and plants develops and grows beautiful under kind treatment, just as does the human character. I was rewarded one winter for special care of *Asparagus tenuissimus*, with a climbing curtain more beautiful than the rarest lace; to see a snow-drift through this curtain, was to rob it of its bleakness. *Asparagus Sprengeri* is the ideal plant for the hanging basket, and A.

plumosus nanus is a lively, cheery green, and particularly graceful in its growth, being pretty sure, if treated half-way respectfully, to make a plume-like vine which will transform a dull corner into a summery bower.

If greenhouses are not within reach the country housewife need not despair, sometimes I even think she has cause for congratulation, for she has only to go to the nearest woods and carefully transplant, with plenty of their own soil, the magnificent clumps of ferns that await her coming.

this particular fern plant was also believed to confer eternal youth. The seed of the fern which reveals treasure is only to be procured Christmas just before midnight, while the *Osmunda* or flowering fern is placed over the door to bring good luck. Again, if in walking through a piece of woodland fern seeds fall unnoticed in one's shoes they are potent for good; then there is one variety which if one walks over it he will be likely to lose his way unless he turns some garment inside out or changes his shoes. All this is very delightful



VARIEGATED LEAVED PINEAPPLE

That the fern has a mute language has been conceded by the superstitious of all ages, who have invested it with marvelous powers. The peasants of Russia believe that it flowers on St. John's night and that the finder of the flower will get all that is said to come of the four-leaved shamrock in Ireland. The fateful hour is midnight and the fortune-seeker walks among the ferns repeating a certain formula. In Thuringia, in Bohemia and Tyrol, fern seed is believed to shine like fiery gold at twelve o'clock St. John's night. The sap of

nonsense, a pretty decoration on the plain fabric of fact.

A bit of green which is most desirable is the English ivy, which does not mind change of temperature and endures neglect patiently, but is the most grateful of vines for every kind office bestowed, sending out fresh tendrils, and smiling, as far as a leaf can smile, every time its face is washed. It is typical of all that is strong and steadfast and should be the vine of faithful friendship.

Waterville, N. Y.

ADA MARIE PECK.



*They whom truth and wisdom lead
Can gather honey from a weed.*
—Cowper.

WHAT THE PLANT DOCTOR SAID.

They had spared no expense for that plant window. They spent at least twelve or fifteen dollars buying the choicest, newest plants. They potted them, and everlastingly fussed with them, the summer through. Asparagus Sprengeri was yellowed and sere; the Boston fern had not grown an inch; the wonderful Acalypha Sanderi and Ruella Makoyana that were to have turned the neighbors green with envy, had barely life left in their ragged selves; the amaryllis had rotted, the abutilons, begonias and fuchsias had died, and the Weeping lantana wept out. Not one geranium or rose in six was alive. As for the rest of this much-hoped-for collection, a few had grown a little, and the rest seemed at a complete standstill.

They sent for the plant doctor, the woman for whom everything grew, and who could coax leaves and flowers out of the most refractory plant alive. At least so her friends said. She asked no questions, but she picked up one pot after another and stirred the earth about the plant roots.

"I can tell you the trouble," said she. "The plants were all right when you got them; you have showered the foliage and kept it clean, and there are no insects on them. So far they are all right. But the roots are all wrong, as is the case with nine-tenths of unthrifty plants. You have not used good earth. It is hard and poor, and some of it has angle-worms in. Darwin may preach until doomsday about earth worms developing fertility in the soil, but every practical plant grower knows they are ruinous to potted plants. Then again you have filled some of the pots to the level rim with soil, so that the water runs off as you shower your plants, and the roots dry and parch out for lack of water, though you have watered your plants copiously every day."

"How do I know that you have watered your plants freely every day? Because those pots that happened not to be filled level full of dirt, are suffering as much from water surfeit as the others are from water thirst. The soil is actually soured in some of these pots, and if you look closely you can see the thin, greenish moss that develops only on water-sick earth.

Such soil develops a poison that kills and rots the roots growing in it. That is what killed your geraniums and primroses. You notice if you take a bit of the dirt between your fingers that it has a dead, putty-like feeling, and really it is not much better fitted for feeding the hungry roots of plants than a potful of putty would be."

"Now if these were my plants I would turn them carefully out of their pots, and pick off all the hard, outside dirt beyond the ball of earth that the roots bind together. Have your new potting compost ready, three parts good mellow loam, one part clean, nice sand, one part old rotted manure well pulverized. Almost any plant will thrive in this mixture which is rich, light and porous. Put an inch of broken crock in the bottom of the pot for drainage, an inch of compost over it, then your plant in its old ball of dirt, after which the half inch of space between the plant and the pot should be filled with this prepared potting earth. Firm the compost well around the old ball of earth that contains the roots, or else in watering the water will all flow off to the softer dirt at the sides, leaving the roots in the center as dry as ever. Water from now on, only when the soil really begins to get dry, then give in such abundance that every atom of the dirt is wet. Plants do not want water until they are thirsty, and then they want a good, satisfying drink. If no more is given until they are again thirsty for water, the soil will never sour. Watering at the right time and in sufficient quantity is more than half the battle."

"Then when your plants begin to grow—which they will soon do when over their water dyspepsia—and when they begin to form flower buds, it is time to begin giving them extra rations. That means liquid manure. Do not give it to weak, or slowly growing plants; do not give it over once a week, and be sure the liquid manure is diluted with clear soft water until of a light brown color, about the shade of not over-strong tea. That will give you big, handsome foliage and plenty of large, richly colored flowers. A tight keg or large jar half filled with barnyard manure, will supply this liquid tea for months.



A BED OF SOUPERT ROSES

Photographed October 1, 1899

Fill to the brim with water. It becomes as black as lye, and is about as strong; but it diluted as stated, it can harm nothing. Or as a pleasanter substitute to handle, you may get some of the prepared flower fertilizers in package form. They are cleanly, convenient, and have directions which are easily followed. Try my advice three months, then report."

They took the advice. Result: End of first week, plants "looked better." End of month all were growing, and of good, fresh, healthy color. At end of three months, nearly every plant was in full bloom.

Moral: Look to the roots of your plants, and be sure you know when and how to give water.

LORA S. LA MANCE.

* *

SOUPERT ROSES.

A letter received from Mr. Max Buehler, gardener to Mr. Spencer Kellogg, at Lochevan, who has had in charge the bed of Soupert Roses referred to on the first page of the October number, gives an account of the management of the bed. He also sends a photograph of it from which has been prepared the present illustration. The letter was dated October 17th. He says:—

"The bed makes a finer show today than

the picture represents. We have had hard frosts here already, enough to kill drace-nas, geraniums and other hardier summer plants. This is a clear proof of the hardiness of the Soupert Roses, especially as the bed is free to the first sunrays in the morning.

"One thing which ought to recommend the Soupert Roses as bedders is, that they are remarkably free from aphids, rosebud bug and mildew. This I have found every year since we have had the bed. I have a good chance to observe this fact, as the large bed of remon-tants or hybrids is just across the lawn, and needs my constant attention during the summer. The Soupert Roses have been free from all pests. With very little attention a bed of Soupert Roses can be had in full blossom, at the least, three or four times during the season, by cutting back the wood that has had flowers. If all the plants are pruned at the same time the bed will bring forth an abundance of flowers again.

"If the plants are left to themselves, a bed of Soupersts will hardly ever be without some flowers during the season, and in full bloom in June, and from September till October. The bed ought to be kept hoed, or what would be better yet, would be to put a good mulch of well-rotted manure about two inches thick,

over the bed. They are a hardy lot, (same as *Hermosa*), and with some protection will stand the severest winter.

Last winter the bed was covered with about five inches of short manure, then dry leaves as high as the branches, and hemlock branches over the whole. If leaves cannot be had straw will answer for the purpose. As soon as the weather allows the winter covering should be taken off, and the best way is to do it gradually; if left too long the wood is liable to get smothered under the cover. This is my experience with the *Souper Roses*."

* *

CHRISTMAS PLUMS.

The Baron of Beef,—two sirloins joined together by the end of the back-bone,—is always served on the royal table at Windsor Castle, Christmas day.

* *

The peacock was once a dish of importance at every English table on Christmas day, and it was always carried into the dining-hall by one of the lady guests most distinguished by birth or beauty. The preparation of this honored bird for the table was attended with no little trouble. The skin with the plumage adhering was carefully taken off and the bird when roasted and partially cooled was again served in its feathers. Sometimes the whole body was covered with gold leaf, and a piece of cotton covered with spirits was placed in its beak, and lighted just before the carver commenced cutting it up.

* *

In Sweden preparations for the coming Yule are made long beforehand. While the grain is unthreshed the choicest sheaves are selected from which to brew the Yule ale and bake the Yule bread. On Julation, the day before Christmas the cattle must be let out from the cow-house and driven to water an hour earlier than common and returned before noon; otherwise the next harvest will be late. The Swedish peasantry have the same antipathy to the forests which characterizes our pioneers; all the trees are carefully cut down around their dwellings. But at Yule young pines stripped of the bark and lower branches are set out before the house; and as the sun goes down a sheaf of unthreshed grain is hoisted on a pole from the house top for the benefit of small birds, for all creatures must have reason to rejoice on the day when Christ came into the world. Meanwhile within the doors the women have been busy scouring and brightening the room and household utensils. The best garments of the family are got out and

hung on the walls for they think the Yule fire shining upon them will preserve them from the moth. The servants then proceed to the cattle house. The mess has been prepared, composed of the same materials as the dinner for the family; a portion of this and a bundle of the choicest forage are given to each cow with the words, "this is Julation my little one," the horses in addition to their forage are given a drink of ale in order that they may be mettlesome when going to matin the next morning.

The poultry are regaled with a dish of *julgrot*, a kind of pudding of flour or rice and milk. The very watch-dog is unchained this night, for it would be a pity that the poor fellow should be tied up while every creature is free and happy.

From the position of the cattle auguries are drawn as to the coming harvest; if they are lying down the crops will be abundant; if they are standing they will be scanty.

When night is fallen, the great room is lighted up with pitch-pine torches and candles; supper comes off at ten or eleven o'clock. A pig's head, or at least some part of a swine, and a large loaf of bread called *jul-boar* is always placed on the table. This is an undoubted relic of heathen times; for the boar was especially dedicated to the god Frey, the giver of light and sunshine, because it was said this animal, by turning up the soil with its tusks, taught man to plow. All the family coin and silver, cups and spoons, are placed on the table, for it is held that the light Yule-fire will cause them to be lucky and increase. The supper concludes with a psalm in which all the company join.

* *

[DAPHNE CNEORUM.

When we occasionally meet with this desirable perennial, we wonder why it is not more generally cultivated. Its clusters of bright pink flowers are very attractive in appearance, and the spicy fragrance of the blossoms is delightful, somehow reminding one of the fabled odors of "Araby the blest."

It is a low growing evergreen shrub, not usually attaining a height of more than a foot, and is perfectly hardy in this locality. The severe weather of last winter and the long-prolonged drouth of the past summer did not, apparently, affect the plants in the least. The first flowers appear early in spring and last for several weeks, and there is a second season of flowering in September, which makes the plants doubly valuable for the hardy border. Although hardy, a slight protection of leaves around the plants will be a benefit, as it is to all perennial plants.

F. B.

CRIMSON RAMBLER IN TREE FORM.

The Crimson Rambler rose has proved so satisfactory by its hardiness, its beauty, and its profusion of bloom that it heads the list of popular varieties in the cool regions of this country. To announce, therefore, as we now do, that it has probably produced a remontant variety, or one that will bloom a second time in the season, will be a pleasing notice to rose-growers.

Edouard André, the celebrated horticulturist, states in *Revue Horticole*, that a plant on the grounds of the Messieurs Barbier at Orleans, France, has made a branch having this habit, and, apparently in relation to a portion of this branch which had been sent to him, he says: "Today, the 10th day of October, I have before me, at my home, a branch covered with flowers." Grafts have been made from this remontant shoot, and it is expected that the new feature will thus be perpetuated.

When making this announcement, the writer mentioned refers to the various ways in which the Crimson Rambler has been employed; such as a wall climber, as a creeper over rocks on a steep declivity, as a hedge plant, in the form of arches and archways. He also shows a new way in which this rose has been exploited, as shown in the engraving presented, originally made from a photograph, and which has been reproduced from the journal mentioned above. It is that of a tree rose of parasol form. A strong stock of the Dog Rose, some six or seven feet in height, was planted in November. Upon several strong shoots which had developed at the top were placed grafts of the Crimson Rambler. The growth from these grafts being cut back the following spring, a number of shoots pushed out forming a fine head.

"In June of the second year," says our author, "the branches, gracefully arched by their own weight, were covered throughout their whole length with a multitude of flowers." Soon after flowering these long shoots are cut back short, and a set of new shoots push out and are allowed to grow freely, and these will produce the flowers the following season. Any shoots that may require it can be brought into proper position by means of fine wire attached to them and the other ends fastened to the stock or main stem,

A plant trained in this form is suitable for a place on the lawn standing by itself, and even

when not in bloom would be an attractive object. If the remontant sport should be perpetuated and its new feature fixed, this new variety would be still more desirable for training in tree form. One of the good points about the Crimson Rambler is that it holds its lustrous foliage well through the summer, being much less liable to suffer injury from insect attacks than the hybrid perpetuals and tea varieties. The Crimson Rambler is so hardy, so free in growth and abundant in bloom that it will probably soon come to be used in our inhospitable northern climates in many more ways than other varieties.



THE CRIMSON RAMBLER
IN TREE FORM

SALVIA SPLENDENS "SILVERSPOT."

Messrs. J. M. Thorburn & Co., New York, are the originators of a new salvia with handsome spotted foliage to which they have given the above name, the plant being a seedling, garden variety of *S. splendens*. The leaves are rich, soft, dark green, with light sulphur or cream colored spots of various sizes scattered over them. The bright scarlet flowers are very large and the plants are as abundant bloomers as those of the well-known *S. splendens*. Eighty-five per cent. of the seedlings are said to come true,—or with spotted foliage.

SANTA CLAUS.

The History of Old Kriss Kringle.

The history of Santa Claus—a curious mixture of truth and fable—goes back into the ancient time. Centuries ago a child was born in Asia Minor who received the name of Nicholas. His parents were wealthy and of high rank, and desiring to express their gratitude to God for the birth of their son, they resolved to educate him in the Christian priesthood. The child was sober and thoughtful, and while yet young both his parents died, and he inherited their great wealth.

He considered the riches a sacred trust; he fed the hungry, clothed the destitute and performed all kinds of good deeds as secretly as possible.

As a priest he was greatly beloved; as a bishop he continued his benevolence. After his death the church canonized him, and he became one of the greatest of patron saints, being revered as the helper of the poor, the protector of the weak, and as the especial patron of little children, who were taught to believe that their good gifts came from him.

Saint Nicholas was the name given him by the monks, and this was familiarly changed to Santa Nicholas, and finally clipped down to Santa Claus, who is still represented as retaining his old habits of secret benevolence and coming down the chimney at nights, laden with Christmas presents for children.

A pleasant fiction it is to them, under the cover of which that charming secrecy concerning the donors of gift is kept up, though little eyes and ears and minds are keen, and Santa Claus is usually very well known to them as a much more modern personage than old St. Nicholas. But the children enjoy the harmless pretense, the mysterious filling of stockings and the heavy laden Christmas tree.

* *

LILIUM RUBELLUM.

The veteran English horticulturist, Mr. Peter Barr, who is making a tour of the world, wrote last summer to Mr. Unger, the head of the firm of L. Boehmer & Co., Yokohama, concerning his recently introduced lily, giving an account of the conditions under which he had found it in Japan, and also some advice in regard to its cultivation. This letter is published in the *Garden*, from which source the main portions of the letter are here copied.

"It is one of the earliest lilies, flowering a month earlier than *L. Krameri*. It grows about one foot high, the color of the flower is more or less that of *L. Krameri*, but the height is one-third less, and the leaves shorter and pale green. On May 8 I was wandering towards the race-course and came upon a little nursery outside of Yokohama, and, on looking over the hedge, I saw under a bush some lilies, one of these was a stranger to me, and, desiring a closer

examination, I went inside and learned it was *L. rubellum*. I was full of delight, and at once set to work to find out all about my new friend. Having just returned from a southern tour where I had *L. Krameri* growing wild and also cultivated, I saw the difference and superiority of *L. rubellum* for pot culture, and may say also for outdoor culture. Collectors told me it came from the north, and as I had no chance to visit its home, I learned from yourself and other shippers that my information was correct, and on further inquiry found that the two species grew under similar conditions. This being so, I think you should make this known to your numerous clients. * * *

When I first saw *L. rubellum* I had just returned from a southern tour. I found *L. Krameri* in a pine forest with a thick undergrowth of brush wood, and in this thick tangle of roots this lily grew. I had it lifted, and to my surprise found no soil adhering. The bulb was actually living amongst the roots in the vegetable soil, and yet the plant was healthy and in bud. A few days later I was wandering about the grounds of one of the many temples, and came upon a flower garden surrounded by a high bank covered with azaleas and capped with trees, which threw a partial shade on the parterre. The beds were raised one foot above the paths, and in one of them I found *L. Krameri* in the most robust of health, stem black, and the leaves of the darkest green. The soil was as poor, stony, and dry as one could possibly imagine, and I felt that herein lay the secret of the health of the lily. I feel therefore no hesitation in recommending that *L. rubellum* in pots should be grown in poor, stony, sandy loam with at least two inches of drainage, and very judiciously watered from the time of potting. The soil must be kept moist, but never wet, and success will be sure to follow. Out of doors I would recommend a northern or dry bank, and failing this, plant under deciduous bushes where the roots in winter will keep the bulbs comparatively dry and shade the plants from the hot sunshine in April and May."

* *

WINTERING CRINUM ORNATUM.

The communication by Mrs. La Mance in last month's issue, in relation to *Crinum ornatum* was, no doubt, read with interest by many persons who have not attained satisfactory results in the management of this plant. There was one point in that communication that the writer omitted to state, viz., the severity of the weather in her locality. In response to an inquiry on this point, Mrs. La Mance writes as follows:

Usually the greatest cold in winter ranges from zero in mild winters, to 10 and 12 degrees below zero in hard winters. Last winter was the most severe ever known in this locality. There were six weeks of extreme cold. The mercury at the lowest dropped to 16 degrees, and some say 18 degrees below zero.

The *crinum* bed was not protected by frame, boughs, or mulching. The plants came up as robust as ever, none the worse for their exposure. They had one advantage, however, that all possibly half-tender plants should be given. They had been planted where walls and shrubbery sheltered the bed on the north and east, protecting them from cold, raw winds and the bitterest cold. If well mulched late in the season, I see no reason why the *crinum* in sheltered nooks should not prove hardy in any of the Middle States. Certainly it is never seen at its best when grown in pots.

It would appear from these statements of weather conditions that *Crinum ornatum* may be wintered outside almost anywhere, especially if given protection. It is hoped that many may try it in this manner another season, and report results.

THE SAN JOSÉ SCALE.

The scare over the San José scale seems to be gradually wearing away. When one looks at the subject in the light of history, he discerns that this is only one of the many scares which have passed over the country; and it has turned out that all of them have awakened more fear than the facts would justify. It is probable, however, that there is more real cause for fear in the case of the San José scale than of most other pests which have come into the country. The fact is that it is a very serious thing. However, the case is not hopeless. We certainly have a specific for the San José scale in the kerosene and water emulsion. I have no hesitation in saying that one can exterminate this scale on any plant which he can spray thoroughly and frequently. Fumigation is the ideal treatment for nursery stock. I have no hope, however, that the scale can ever be eradicated from the State. In some places it has got into the wild growths, and comparatively few people will take the pains and trouble to spray thoroughly. The great mass of the people cannot or will not hold it in check.

I fully believe in a law which compels the destruction of plants which are seriously infested with the scale, leaving the discretionary

power in the hands of inspectors or other officers. I believe that, with the great majority of people, this is the only safeguard. The scale is a very serious pest because it can be spread far and wide by means of nursery stock; whereas many other serious pests are not spread in that way.

If one were to go over the history of similar subjects, he would be surprised to find the extravagant assertions which were once made for pests which now awaken very little anxiety. One of these, was the Canada thistle. In the early part of this century it was prophesied that this weed would so fully usurp the land that it would prevent the people from securing food and thereby cause the downfall of the nation. The difficulty with all these prophecies has been that we have reasoned from the behavior of the pest when it was confined in a comparatively small area. If one were to contemplate a garden which is completely usurped by Canada thistles and were then to extend that condition to all parts of the Union, he would arrive at the conclusions which I have mentioned; but because a pest is exceedingly serious one year or in one place, is not proof that it will be equally serious in all years and in all places.

L. H. BAILEY.

CYPRIPEDIUM SPECTABILE.

The showy Lady's Slipper, figured in the frontispiece this month, is one of the most beautiful of our native orchids; and those who are familiar with it will recognize the correctness of the likeness presented. It grows in peat bogs and moist places through the northern country from Maine westward to Minnesota and Missouri, and southwards in mountain regions to North Carolina. It specially delights in a place near a waterfall where it may be almost continually bathed by the spray. Notwithstanding its natural selection of moist places there is no particular difficulty in cultivating it if its wants are understood and to some extent supplied. Nor is it necessary that it should have soil that is more than ordinarily moist. For several years a number of these plants mixed in a bed of ferns on the north side of a house were under the observation of the writer, and they appeared to be perfectly suited with the location and bloomed regularly in summer.

This bed contained a good proportion of leafmold mixed with the ordinary soil. It

received the early morning sun, but none afterwards, as a porch sheltered it from the west, preventing the entrance of the afternoon sun, and, also, protecting it from the west and southwest winds. Except on rainy days, or while the ground was yet wet, it received a daily shower bath through the hose sprinkler attached to the city water works. This treatment suited both the ferns and the Lady's Slippers and all of them continued for years to thrive and show their handsomest features. Those who should attempt the cultivation of this Lady's Slipper will find it necessary to secure conditions similar to those described, though a diligent use of the water-can would serve instead of the hose.

The plant grows from one to two feet in height; leaves ovate, acute, downy, sheathing each other. Under what is called the "new nomenclature" the revisionists now apply to the plant the name *C. reginæ*, the one given in 1788 by Thomas Walter, the author of *Flora Caroliniana*, but it will be long before this name comes into common use, for as yet there

is no general agreement upon it. The best time to set the plants in the garden is probably early in the spring, and they can be procured of those few establishments making the cultivation of hardy native herbaceous perennial plants a prominent feature of their business, but not of plant dealers generally. It is well worthy of cultivation by those having the proper facilities for it, as the beautiful flowers continue in good condition for many days, and the plants last for years.

* *

SUGAR BEETS IN 1898.

The Agricultural Experiment Station of Nebraska publishes a bulletin on the "Culture of Sugar Beet in Nebraska." The account relates to the trials and investigations made in 1898 on a field of five acres in the Platte River Valley, at Ames, Dodge county, Nebraska. This field was placed at the disposal of the Station by the Standard Cattle Company, of Ames, free of cost, for a period of five years. The soil at this point represents much better the typical sugar-beet soil of the State than does that of the Experiment Station farm. In addition, the Station had the privilege of using, for purposes of investigation, three hundred acres of sugar beets, including thirty varieties, planted by the Standard Cattle Company. The bulletin is quite interesting in its detailed statements, and the following conclusions were reached:

No advantage was derived this year from the use of "large seed" or "heavy seed."

The most satisfactory method of planting was in rows eighteen inches apart, and thinning out the beets to eight inches in the row, as compared with rows thirty inches apart with beets four inches apart, and also as compared with hills eighteen by eight inches apart.

Shallow cultivation and hoeing are preferable to deep cultivation and hoeing. Sugar is not "hoed into the beet" in this region.

A slightly increased yield of beets was produced by the use of commercial fertilizers, but no improvement in sugar content and purity.

A comparison of a light soil with a heavy one showed that beets on the former matured more rapidly, but those on the heavy soil attained the higher sugar content and purity.

* *

THE TIGER LILY.

Lilium tigrinum is a native of Eastern Asia and Japan, and is perhaps the most commonly grown, in this region at least, of any of the true lilies. I do not know, perhaps no one does, how long a lily bulb will live, it may depend on circumstances. But I know that a bed of tiger lilies is good for indefinite years, the young plants taking the place of their elders now and then, no doubt, no one noticing that the old ones pass away. Six or more feet in height when well grown, with rich, dark, shin-

ing foliage and a broad crown of great, orange scarlet, black spotted, dark stemmed flowers, growing in any soil, of iron clad hardness and very easily propagated, it deserves all the popularity it has, and should have still more. The Chinese and Japs grow it as a farm crop for its bulbs.

Perhaps fifty years ago my mother brought home a little bulblet or two, and ever since its stems have grown and its flowers opened with us. Upon each leaf close to the stem nestles a little shiny black bulblet, there may be 100 on one stalk. They soon drop off, and falling on clean, loose soil will take root and grow. Or, you may gather and sow them like seeds. They will come up in the spring showing one long narrow leaf at first. The young plant may have a flower or two the second year, the third it may have a dozen on a stem high as your head.

The petals turn back till their points almost touch the stem of the flower, like those of the Turk's cap lily, *L. superbum*. There is a double variety, but in my opinion it isn't worth much. Instead of the beautiful stamens of the normal form there is a lump of twisted and and disturbed petals which often fail to open much, a miserable affair so far as I have seen. Put an inch or two of fine manure upon the bed late in the fall, keep grass and weeds back and you will have a profusion of bloom.

E. S. GILBERT.

* *

BULBS IN THE SOUTH ATLANTIC STATES.

In a communication to *American Gardening*, W. F. Massey, Raleigh, N. C., makes the following observations:—

Fall planted bulbs need a treatment different from that of the North. We must not plant too early. This is especially the case with the polyanthus section of *Narcissus*. If planted early they grow at once, and are certain to get hurt when our January cold comes. But planted in December they always do well. We are hoping to keep back the Roman Hyacinths by late planting and heavy mulching. Planted here in the fall they invariably begin to bloom about Christmas and struggle with the frost all through January. But set late they give us a bloom after the February cold is over and are fine into March, and the bulbs are far better than those that were above ground during the cold weather. The advice is often given to plant bulbs early, and that will do where the soil gets cool early, but will not do here. We hope by heavy mulching to check this tendency to too early blooming.

* *

THE long-stemmed blossoms of the chrysanthemums which you get from the florists often wilt very soon. If the stems are cut off considerably shorter and the flowers placed in water, they will gradually revive. Hot water acts more quickly on them than cold and does the flowers no harm.

F. B.



FLOWER GARDEN ON A ROCK LEDGE

MAKING WASTE LAND BLOOM.

In the given illustration, flower-beds are shown, built on top of a rock ledge, which, at first sight, appeared to monopolize more of our front yard than we liked. Now, it is one of the prettiest spots on the whole place. Superb pansies fill the upper bed, and they have proved, during the five years we have cultivated them, to be one of the best flowers for sea-shore culture. We are situated in eastern Maine, on the shores of the "Bay of Fundy," where,

"Loud from its rocky caverns,
The deep-voiced neighboring ocean speaks,
And in accents disconsolate
Answers the wail of the forest."

Consequently the flower lovers of our little village have to don their thinking caps before choosing such seeds and plants, as are adapted to the short foggy summers of this region. Our fogs are unlike Longfellow's Acadian fogs, where,

"Aloft on the mountains sea-fogs pitched their tents,
And mists from the mighty Atlantic
Looked on the happy valley,
But ne'er from their station descended."

On the contrary, our fogs have a decidedly cool way of stealing in upon us at the close of some bright day, and staying until everybody is tired and achey, and cross, and wishing there were no such thing as fog; then, as suddenly leaving, and sunshine and happiness reign supreme, until the same unwelcome visitor again boldly enters our lovely little harbor.

Yet, even fog brings some advantages with

it. Pansies just revel in it; lifting up their bright little faces, which grow brighter and broader every day while the fog stays. Then, being so close to the ocean, sharp frosts are almost unknown until late autumn, this, being in a measure, some compensation, for the unwelcome visits of the fog.

The grass and leaves retain their fresh green color longer, and sweet peas and asters, nasturtiums, chrysanthemums, carnations, and even roses are blooming here for weeks after inland gardens, ten or fifteen miles from the coast, have succumbed to the frost-king. With a light covering of fir boughs, the pansy bed, as here shown, comes out the first of April beautiful and green, covered with buds, yielding through the entire season, from April to Thanksgiving, thousands of blossoms.

I transplanted in May, this year, sixty fine pansy plants, raised from seed planted in boxes, in the house, in February. We refill the bed with young, strong plants once in three years, as constant blooming weakens after a while. I have seen this same pansy bed in full bloom on a November day, and the next morning buried out of sight, under the snow. Whatever rare and lovely flowers grace my garden, I can not dispense with the pansy, for it has won, with its modest beauty, a place in my heart which no other flower can fill.

The lower bed has bedding roses; they are very beautiful, Coquette de Lyon and Marie

Lambert being especial favorites. Climbing nasturtiums and lobelia make a fine border; the pretty green leaves and masses of bright colored blossoms of the nasturtiums trailing over the rocky wall of the bed and running over the despised ledge, forming, in this corner of our yard, the very prettiest, among many flower-beds, on the premises. Marguerite carnations help to fill the center of the bed, with pansies dotted here and there. The roses purchased in the early spring have yielded a very fair quantity of blossoms, of wondrous beauty; growth being steady, and the bushes very free from insects. The roses which opened during the bright sunny days of September were the finest of the season. Today, September 29, the pink Hermosa and Marie Lambert both have blossoms besides many fine buds. Coquette de Lyon is also budding again. On September 26, a cluster of four handsome roses, all on one branch, was cut from Queen's Scarlet.

Being the roses' first season I postponed all pruning until February, when they will be taken from the cellar; being eager to see the blossoms, the plants have had their own sweet, rambling will this season, each bud coming to maturity. The dry weather during the summer and early autumn gave us fine roses this year, they even were on friendly terms with the fog, not one bud blighting from contact with our chill, and often too frequent visitor. One of my old-fashioned garden roses is very disappointing in this respect, sometimes during a foggy week hundreds of buds blighting. I have been tempted to pull it up by the roots and set a Margaret Dickson in its place. Was it not our lamented and much-loved president, Abraham Lincoln, who said: "He wished to be remembered as the man who planted the rose in place of the thistle!" Could the self-same desire be implanted in the heart of every boy and girl, not only in our United States, but all over this "great, wide, beautiful, wonderful world" of ours, what a transformation would soon take place; and multitudes of weary hearts be gladdened at sight of waste places covered with the cheerful bloom of the bright, bright flowers, which speak but one language the world over, from the sweet and modest wild-wood offering to the choicest bouquet from the florist's skillful hand; the language of love and sympathy. Give me those old, old friends, my books and flowers, and I have access to a charming world where there is never any lack of interest.

Cutler, Maine. MAY MOORE THURLOW.

* * *

IF YOU have not sown some seed of mignonette, get a pot already started at the florist's.

FLOWERS FOR SALE.

A very modest sign with above words attracted my attention, in the early fall, to a small garden plot of Asters in full bloom. In spite of the severe drouth of the summer, the flowers were fine and a number of varieties and colors were represented. The lot was a small city one, but all available ground was occupied, and as there was quite an open space between the adjacent houses the flowers had plenty of sunshine.

I was much interested in the show of blossoms and was curious to know if there were sales enough to make the experiment pay. At the close of the season, a few questions met with very courteous response. The experiment was a great success; not only were all the flowers sold, but many more could have been, as the demand was greater than the supply.

Why cannot more women in the cities or large towns, women who have some spare time from their household duties and who would like to add a little to their income, go and do likewise?
F. B.

* * *

PERENNIAL PHLOX AND PHLOX SUBULATA.

It is quite true, as E. S. Gilbert says in the September number, that left to itself in most gardens the perennial phlox overruns its borders in rather weedy fashion. These scattering clumps and borders never produce extra-fine flowers, however, and I would much rather give one clump of each variety the culture English gardeners recommend, securing from it the best flowers of which it is capable, than to have a weedy hodge-podge of poor flowers. I have plenty of room in my garden but cannot give it all to phloxes, even to prove how obliging they are about growing themselves. Mr. Gilbert's note about the creeping phlox was most timely. There are few plants that will grow equally well on all soils to be sure.

* * *

A NEW STOCK FOR THE LILAC.

In the propagation of the many varieties of Lilac now in vogue gardeners have used as stocks the common lilac, *Syringa vulgaris*, and the common privet, *Ligustrum vulgare*. The Germans have found the common European ash, *Fraxinus excelsior*, to be an admirable stock for the same purpose, being superior to the privet in strength of growth and longevity, and less liable to be injured by moth grubs. Budding and grafting can both be practised on this stock.

A NEW SPECIES OF LILY.

A species of lily which has not yet been disseminated has lately been described in *Revue Horticole*. This is *Lilium Sutchuenense*. It has been for several years in the possession of the Vilmorins who have been cultivating and testing it. The engraving and also, the facts



LILIUM SUTCHUENENSE

in regard to this species, here presented, have been derived from the *Revue*. Seeds of this lily were gathered in the province of Su-Tchuen, China, by a missionary, the Abbe Farges, and sent to the house of Vilmorin. The seeds were sown as soon as received; they germinated well and the little plants were potted and then formed small bulbs, and two years later, in 1897, showed their first flowers. These bulbs replanted in 1898 and again in 1899 have increased in strength, and the flowers on the stems have increased in number. A photograph of one of the plants served as the original of the engraving here shown. Without attempting a closely technical description of the plant the following are some of the main points: The bulb is small, white, nearly the size of a walnut, and having closely set, thickish scales. The stem is about fifteen to twenty inches long, slender, flexuous, finely spotted with white. Leaves numerous, scattered, narrowly linear, the longest three to three and a half inches in length. A vigorous stock will produce from one to seven flowers borne on horizontal stems from two to two and a half inches long; the flower is pendent, with the divisions reflexed nearly to a perpendicular position; when these are extended horizontally it will measure nearly four inches in diameter, and in its natural form an inch and a

quarter to an inch and a half. The color is a clear orange, shining, and dotted with brown spots in the middle of the divisions. The flowering period is the early part of July, after which it ripens its seeds. It belongs to the same section of the lily family as *L. tigrinum* and *L. tenuifolium*, and comes from the same region of country.

It is distinct from the two species named by its intermediate proportions. It is a stronger plant than *L. tenuifolium*, produces more flowers, blooming at the same time, but the flowers are nearly twice as large, spotted and of a color less bright. It differs from *L. tigrinum* by its smaller size, its narrower foliage, the absence of bulbils at the axils of the leaves, by its smaller flowers of the same color and form, but very much earlier.

The culture of this lily may be made in the open ground, in light, fertile soil, or in pots, one bulb in each, or three or more in deep pots.

The hardiness of this species is not yet known, for up to this time the bulbs have been wintered in sand or in pots in which they have grown. The bulbs should be planted early in spring and sufficiently deep, two or three inches at least, in the clear above them to the surface of the soil, so that the roots which spring from the base of the stem will have room to develop.

Lilium Sutchuenense produces seeds freely. Only the seeds have yet been employed as a means of propagation, as the bulbs do not multiply freely. The seeds sown in pots in the greenhouse or cold frame in springtime, in soil largely consisting of leaf mold, will germinate in a few weeks and form the first year little bulbs about the size of a pea and bearing one leaf; the second year a stem is formed, and sometimes one or two flowers may be borne. But it is not until the third year that the plants acquire their nearly normal size and full bloom.

* *

JAPANESE GARDENING AT PARIS.

Preparatory to the great horticultural displays at Paris next year, a number of skilled Japanese gardeners have already taken up a temporary residence there to care for the plants which will constitute a part of Japan's offering in the great international exhibit. The Japanese section of the horticultural exhibit will, no doubt, be very attractive, and besides the dwarfed trees and a great variety of the Japanese flora, a fine display of the Japanese Morning Glory and Chrysanthemums, in their many peculiar forms of flowers and plants, may be expected.

SUB-WATERING FOR RADISHES.

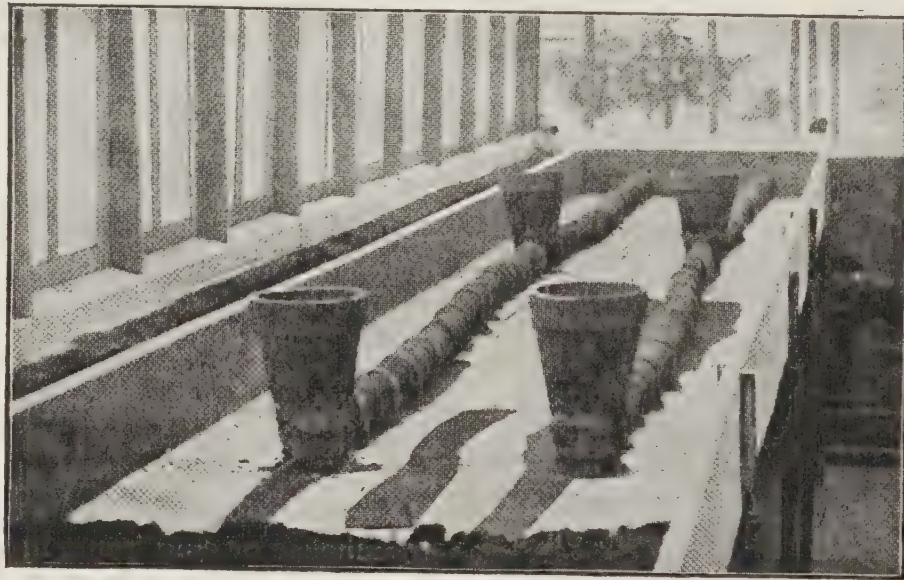
The annual report, for 1898, of the Maine Agricultural Experiment Station, is a volume of much practical interest. The horticultural portions of the report, written by W. M. Munson, horticulturist of the station, are of especial value. A chapter, under the heading of "The Effect of Sub-Watering Radishes," prepared by W. M. Munson and L. J. Shepard, gives an account of the operations conducted at the station in pursuance of raising radishes under glass. The more essential portions of the chapter are here given, and the accompanying engravings tell the rest of the story.

Much has been said and written upon the subject of "sub-watering" or "sub-irrigation" in greenhouses. The present paper simply details the experience of the writers in

of those sub-watered was 86 and a fraction, and that of the surface watered 71 and a fraction.

There was little difference in the per cent. of germination in the two lots; but the plants which were sub-watered were superior to the others from the beginning. At the time of harvesting, the number of first-class roots on the sub-watered section exceeded that on the surface watered section by 16 per cent.; while the average weight was 14.5 per cent. greater. This difference is plainly shown in the accompanying figure.

Second Trial: A second bench in the radish house was divided into two sections, and the advantage of sub-watering was demonstrated on a commercial scale. In this instance, the arrangement for sub-watering was somewhat different than in the previous one. The bottom and sides of the bed were coated with Portland cement. On this was placed about two inches of potsherds and broken brick, and then, after covering the brick with some pieces of burlaps, the soil was put in place. As the soil became dry, water was admitted through a pipe to the stratum of potsherds. A



GREENHOUSE BENCH ARRANGED
FOR SUB-WATERING

growing radishes by the new method and by the ordinary method of surface watering.

The method usually employed, in sub-watering greenhouse benches, is to provide a water-tight bottom and run one or more lines of tile or perforated iron pipe underneath the soil. The method employed in the first trial noted below was suggested by Professor Woods, and consists of a line of 2-inch drain pipe, cemented at the joints and closed at the ends, as seen in the cut. The water for the soil must pass through the porous sides of the tile.

First Trial: A quantity of seeds carefully selected as to size and quality, were planted on the lower bench in the house devoted to lettuce and radishes. When the plants were two weeks old they were thinned to about 1½ inches. After thinning, some of the plants damped off, so that the total number in the two lots is not the same.

Without giving all the features of the results of this trial, it is sufficient to say that with reference to the whole number of plants in each case that germinated, 79 per cent. of the sub-watered plants came to maturity, and 63 per cent. of those which were surface watered. The per centage by weight of first-class roots

of those sub-watered was 86 and a fraction, and that of the surface watered 71 and a fraction. Each section of the bench was fourteen feet eight inches long and twenty-eight inches wide. The seed was planted in rows, eight inches apart, between rows of lettuce—twenty-two rows in each lot.

There was little difference in germination of the two lots, but very many more plants were lost by damping off on the surface watered section,—a fact that partly accounts for the difference in yield at harvest time.

The sub-watered section yielded twice as many bunches of marketable roots as did the other. The per cent. of marketable roots was much higher and the average size greater from the sub-watered section. The difference in the yield of the two sections was more than enough to make the difference between profit and loss in growing the crop.

* * *

CALLIRHOE INVOLUCRATA is an elegant perennial of easy cultivation. The flowers are a beautiful crimson, with a white border at the base of the petals, and are nearly two inches across. Plants can be raised from seed or from cuttings.

NOTES FROM AN OREGON GARDEN.

Centaurea Marguerite is all that is claimed for it. From the tiniest seedling it is perfectly hardy, paying no attention to freezing nights, drenching rains, pelting hail storms or even to being buried in snow, but comes up bright and smiling, and grows rapidly through all. And then the blooms, so large, white, fluffy and fragrant, and of such lasting texture. A week they will keep in water, and they mingle so beautifully with other flowers in bouquets.

The richness of the *Madame Gunther* and *Chameleon nasturtiums* has not been over-rated. Indeed it scarcely can be. My favorite among them all has a delicate cream colored ground, splashed and mottled with rose. It is simply exquisite.

a small rope around these stakes, and pinning to the rope with clothes-pins a muslin sheet. It isn't artistic, but it is effectual, and the lilies look so "comfy" under it.

Mayville, Oregon.

E. B. F.

* *

SOME TEXAS NOTES.

Everything was frozen by that hard frost last spring and now we have had a four month's drouth, so you see my poor flowers have had a hard fight for their lives. Of course the bulbs were not hurt, though we lost the blooming of the narcissus, and I have a good mind to plant nothing but bulbs any more.

The sweetbrier flourished and the cardinal flower was green all through the drouth, and



A COMPARISON OF RADISHES FROM SURFACE-WATERED AND SUB-WATERED BENCHES

Petunias should never be omitted from the gardens of the dry countries. Such a gorgeous mass of color mine are showing now, this dry hot August.

My *verbenas* are fine, thrifty plants, just beginning to bloom, and what could be lovelier! I know I shall want to lift the whole bed indoors when frost comes.

Don't attempt to grow *cannas* out of doors if you live where drouth prevails and irrigation out of the question. They are sure to grow brown on the edges of the leaves, and become unsightly.

Gladioli forever! Long live the bulbs of our flower garden. And among them none are handsomer than these, and none so easily cared for.

If your lily bed is tiny, you may shield your buds and blossoms from the burning sun by driving a light stake at each corner, fastening

I wish you could have seen it in bloom. It was high as my waist, and the spikes were magnificent. I do not think anything else has just that glowing color. There is no sign of it now, October 21, but I hope the leaves will appear when the rains begin. It was a pet of my childhood, and I am so glad to have it again.

The sweet clover grew almost as high as my head and bloomed like a *maderia* vine.

The tops of my rose bushes were killed, but all sprouted from the root except *La Pactole*.

Wills Point, Texas.

MRS. T. F. W.

* *

If you suspect that worms are working at the roots of your pot plants, dissolve a tablespoonful of mustard in a little water and pour it on the soil. Its effects are so immediate as to be almost startling.

A GARDEN PAPER.

Of what use would a horticultural paper be to me, is asked incredulously by many people. Yet in the country and villages there is not a family that does not cultivate some fruit, flower or vegetable. And city people would find much information about the best sorts to buy.

But we find people to whom such a magazine does seem useless. They skim it through, cut out the colored plates for the children's scrap books, and throw the rest away. When they are wondering what ails this plant or that, they cry piteously, "I saw something about that a few months ago, but I can't remember it now." Who could?

The MAGAZINE's chief use is as an encyclopedia; though to many of us it is more entertaining than a story paper. One woman whose eyes will not permit her to read a whole article at a time, takes a flower paper which she does not pretend to read, but uses wholly for reference.

D.

.

WINTERING CELERY.

The large celery growers of Kalamazoo, Michigan, winter the celery in houses or frames constructed for the purpose. Selecting a piece of upland, dry ground, the soil is excavated two feet deep. A frame is then set up which is six feet high at the ridge pole. The roof is covered with boards twelve feet in length running from the peak of the roof to the ground surface. Enough windows are put in to give needed light. The sides of the house are banked up all around, and coarse litter or straw or hay is covered over the roof to keep out frost. These storage houses or cellars are built twenty-four feet wide and from fifty to 100 feet in length. A building fifty feet long will hold 50,000 heads of celery. The plants are dug while green, the roots left on, and they are set upright in the cellars, as closely together as they can be packed, and in a few weeks in these quarters they are well blanched, and ready for marketing as desired.

.

BEAUTY BY ACCIDENT.

On ground in my garden where portulaccas had previously grown I put out strawberry plants last fall. This season the portulaccas came up so thickly I was obliged to pull them out as weeds. After the berries were picked the strawberry runners were allowed a free hand and have completely covered the bed. Some of the portulaccas were overlooked and now come peeping up through the rich green strawberry foliage with the result that I have as pretty a patch of blooming strawberries as

one could wish to see. The portulacca in its own garb at mid-autumn has rather a seedy look, but the strawberry's coat just helps out, and the result is charming. I have left in some places only the reds, in other, the yellows, etc. The brilliant scarlet seems to make the best contrast.

M. A. G.

.

BACK YARD FLOWER GARDEN.

This flower garden is owned by two maiden ladies, who do all the work, planting, weeding and pruning. It is in bloom from May until November. The picture was taken the last of September, when Jack Frost with his sickle stood ready to cut down many of the tender plants. Sweet Peas were still blooming on the lattice and Golden Glow was bursting with the sunshine it had gathered through the summer.



"THE BORDERS WERE SWEET WITH ALYSSUM"

The borders were sweet with Alyssum, and Monthly Roses vied with Carnations to make the garden a bower of beauty.

RUTH RAYMOND.

.

IN SOME OF our Western States the farmers used simply to drive through their extensive fields of corn and gather the ears, leaving the uncut stalks to whiten in the chilly blasts of winter, or they turned in droves of hogs to fatten on them as they stood. In other parts of the west both the stalks and the corn itself were used for fuel. Now the stalks are being used as a basis for a number of new and important industries, and thirty-six distinct and useful products are made from the grain of corn alone.

.

THE CROP of an apple orchard of twenty-one acres in Rappahannock county, Va., was sold this fall for \$5,000. The principal varieties were Albemarle Pippins and Johnson's Winter.

FRUIT NOTES.

MR. F. W. LOUDON, THE FRUIT ORIGINATOR.

Mr. F. W. Loudon, of Janesville, Wisconsin, who originated the Loudon Raspberry and the Jessie, the Governor Hoard and the several varieties of Bubach Strawberries, is also the originator of many other varieties of fruits. He states in the Wisconsin *Horticulturist* that he has "two new red raspberries originated eight years ago, to take the place of the Turner for early. The berry is one-third larger, of superior quality, very prolific, and quite hardy here (Janesville) which cannot be said of the Turner. Mr. Loudon says if his life is spared he may introduce them to the public. Besides the above he has "ten native plums which cannot be equaled for quality, having no acrid taste, and some being larger than the De Soto. They yield immensely every year and the curculio never stings them." "I also have," he says, eight seedling Morello cherries, eight varieties, each of which has endured the winter for ten years when the Early Richmond, twelve feet away, has been killed to the ground. Each has its season, the earliest ripening ten days before the Early Richmond, and when it is gone, the next one takes up the succession, and so on, till all have fruited. The cherry is one-fourth larger than the Montmorency." "I have fifty-three varieties of seedling grapes, mostly red and white, and all selected for their excellence. I am propagating twenty of the best kinds.

"I also have forty varieties of seedling potatoes of my originating; also three varieties of asparagus, stalks of each having been cut which were two inches in diameter."

An account, given in the journal mentioned, of Mr. Loudon's display of seedling grapes at the Wisconsin State Fair, says: "What is most wonderful, is that one man in a long life-time, should have succeeded in securing so many first-class varieties, by which we may hope to succeed in growing grapes to perfection in the most northern portion of our country, and it is to be hoped that they will soon be propagated and placed upon the market.

Mr. Loudon has proved himself a public benefactor, for he has spent the best years of a long and useful life in developing the horticulture of the west by originating or creating and improving our fruits, and demonstrating their adaptation to growing in the more arid regions of our country, and he stands today the peer of the late Ephraim Bull, of Massachusetts, and George W. Campbell, of Ohio, in

the improvement of the grape and other fruits and deserves a place in the front ranks with the great pomologists of the age." It is added that "past rewards have been but little more than the happy consciousness of having accomplished great good to his fellowmen."

Mr. Loudon is now in the 81st year of his age.

* *

FALL AND WINTER WORK AGAINST INJURIOUS INSECTS.

Many of our most destructive insects, says a bulletin of the Ohio Experiment Station, pass the winter either among matted prostrate grass, among fallen leaves or especially along hedges, lanes and fence corners. Wherever such places can be burned over in late fall, winter or early spring, the effect will be to destroy many of these. Instead of having our annual clearing up in May, as many do who clear up their premises at all, this should be done during the seasons above mentioned, as by May many of the destructive insects have left their winter quarters and are beyond reach.

In the orchard, the falling of the leaves will reveal cocoons and even insects themselves upon the trees that can not be easily detected while the foliage is still hanging to these trees. Many insects pass the winter within a folded leaf that is attached to the twig to prevent it from dropping off, and in this way deceive the eye of the orchardist. It will pay to go over the orchard and remove all of the cocoons and dried leaves still clinging to the trees.

* *

APPLE STORAGE.

The most important condition in storing apples is the temperature. The storage room should be kept very near freezing point, ranging preferably from 33 to 35 degrees Fahr. Even a degree or two below freezing will ordinarily do no damage. Temperatures which will ruin potatoes and other vegetables are entirely favorable to apples; and, conversely, temperatures which are suitable to potatoes are too high for apples.

* *

CAMPBELL'S EARLY GRAPE.

Referring to the item in VICK'S MAGAZINE for October about Campbell's Early Grape at John Charlton's, I saw a vine of it, on my old farm in Ashfield, Massachusetts, which produced a very heavy crop this season, and both cluster and berry were very large and full. I should suspect some mistake about Mr. Charlton's vine.

WM. F. BASSETT.

NEW WAY OF PACKING FRUITS.

The *Gardeners' Chronicle* notices a new method of packing fruit for shipment by Victoria fruit growers. It first makes the statement that many consignments of apples and pears from the Cape of Good Hope and Australia, in which each specimen is wrapped in tissue fail to arrive in good condition, in London, although on shipboard they are stored in refrigerator chambers. Pears, especially, fail to go through the journey in good condition.

Instead of packing the apples wrapped in tissue only, in the case of several bushels that have recently arrived in London by the S. S. *Wakaod*, a quantity of asbestos or a preparation of this substance has been used. The fruits were wrapped in tissue as formerly, and afterwards imbedded in the asbestos, each fruit being perfectly surrounded by this substance. Upon unpacking the case, the asbestos appeared to be caked, but it was easily broken up, and then appeared almost like flour. We should suppose, therefore, that the fruits would be airtight under such conditions, and this will account for the fact that as we saw them they were perfectly sound, and in excellent condition, although five months had elapsed since they were packed in the boxes.

* * * * *

The apples were gathered and packed previous to May 5, last, but owing to some objection, we believe, on the part of the steamship companies, there was a delay of two months or more before shipment, and even then they travelled by the Cape route. The companies, naturally perhaps, object to the introduction of a new system of packing fruits that may render unnecessary the cool chambers that have cost so much money to provide. But such objections will, no doubt, be overcome, and if a syndicate be formed, as is now proposed, the system will be given a conclusive trial. The new system, should it answer to expectations, will possess several advantages. The fruit may then be stored in the hold of the ship, and the freight per bushel-case will be 6 d. instead of 3 s. 9 d.; but as the packing material will displace a quantity of the fruits in each package, it may be well for the present purposes to describe the future freight of the fruit as 1 s. per bushel.

It must be remembered also that the asbestos is a valuable material in England, and it will be sold here to as much advantage as will the apples. The result will be that the asbestos and fruit would be brought to England for less money than is now paid for the fruits alone. The apples will travel as well or better, and it is thought they may be preserved after arrival here for weeks if necessary, providing that the cases be not opened in the meantime. And beyond the other considerations, it is hoped also that Victorian pears by this system may be placed on the English market without much risk of loss by decay.

Possibly this experience may be of some value to fruit-growers, especially pear-growers and shippers, in this country.

* *

LIKES THE COLORED PLATE.

The October MAGAZINE in its new form came sometime ago and I meant to have written a bit in my last letter about it, but as it happened I had a chance to send the letter and there was no time to do so. The size of the page makes it much more convenient to handle, and it will be more likely to be preserved and bound than before. I like the colored plate feature very much, I have missed these

a good deal of late years. I liked the cover of the old form with its beautiful new picture each month, but on the whole the change is an improvement.

E. S. GILBERT.

* *

CEMENT FOR THE BORERS.

Water lime or cement mixed with skim milk forms a wash for the trunks of peach and apple trees that prevents the work of borers. Put on in the spring it remains in good condition during the summer. The growth of the tree tends to crack it in places but it is well towards the end of the season, to go over the trees with stiff brush or short splintered broom and break up the coating.

* *

PROPAGATING JAPAN QUINCE.

The method here described for multiplying the Japan quince is given by the *Florists' Exchange*, but it would probably be better still to heel the cuttings in, in the fall, upside down, in the way that grape and currant cuttings are treated, so that the cuttings will callous before planting.

Take cuttings from the young wood in the fall and heel them in, in a protected situation. In the spring plant in a shady place and roots will then form and growth commence. Marketable plants will result in two seasons.

* *

STORING TENDER WATER LILIES.—Where there are small plants or tubers of any of the tender lilies, such as *Nymphaea zanzibarensis*, its varieties *azurea* and *rosea*, the Australian *N. gigantea*, *N. cœrulea* and *N. scutifolia*, let the old ones go, as they are difficult to keep over the winter, except in a large greenhouse tank, and even then the game is not worth the candle. Small, dormant tubers of any of the above can be started in the spring, and by careful manipulation they will give several plants each, which will afford as much, if not more, satisfaction than would the older plants. Another matter which should be kept in mind concerning the above kinds is that they do not form small tubers at the sides of the large ones made during the growing season. The reverse is the case with such species and forms as *N. dentata*, *N. Devonensis*, *N. rubra*, *N. Sturtevantii*, *N. O'Marana*, *N. Columbiana*, *N. Deaniana*, *N. delicatissima* and *N. Smithiana*. These all form tubers around the sides of the parent tuber or root stock; they are very irregular in shape, not at all resembling the pear-shaped tuber of a young starved plant. After the display of flowers is over for the season, cut off the leaves close to the crown, and with a spade cut off the roots about six inches from the crown; lift the clump and put beneath the stage of a warm house. The central part will decay in a short time, and before this actually happens the tubers may be gathered and stored for the winter.—G. W. O. in *Florists' Exchange*.

* *

COVER THE BULB BEDS.—The newly planted bulb beds in cold climates should have a good covering either of well rotted manure or of long stable litter. The frost injures the bulbs, and especially lilies, by heaving the ground and thus leaving the roots and the scales exposed giving opportunity for decay and disease to set in.

BUD, BLOOM & SEED POD

*Nearer to the river's trembling edge
There grew broad flag flowers, purple, pranked with white,
And starry river-buds among the sedge,
And floating water lilies, broad and bright.*

—Shelley.

Protection.
Christmas trees thrive.
Keep down plant insects.
Are the onions stored cool?
Let the garden plan be simple.
Dwarf apple culture is not popular.
Imagine floral world without chrysanthemums.

Winter is cropping time for new garden ideas.

The MAGAZINE believes in school-yard gardening.

Thunberg's spirea makes a beautiful dwarf hedge.

Summer mulch may attract mice. Draw it from the trees.

If pot coleus or heliotrope get frost nipped, out with them.

A walk should be laid out so gracefully, that in itself it is ornamental.

How deep shall I cover strawberries? asks a reader. Only sufficiently to hide the plants.

Can a garden be complete if it is not underdrained either naturally or otherwise? We say not.

Don't misuse the tree agent. Size him up. The honest agent may bless you. He is a missionary in a good cause.

An evergreen branch, as from a spruce tree, is one of the best shelters. laying it down over the plat to be covered.

Everbearing strawberries of the alpine order have little value for fruit, As a curiosity they may be worth a place in the garden.

Plants in the cellar should be looked after occasionally. Being in a dormant state they need but little moisture. At the same they must not be allowed to get dust dry.

Begonias. To me there are no other plants so satisfactory for the window collection in winter as the begonias. I have made them a specialty, each year adding new and beautiful varieties. They are of easy culture. They never fail me.—E. Y. M.

A floral car wrought in hydrangea flowers, is reported with a flourish as having been shown at a recent New England affair. Think of

such a use of flowers! For our part we believe it could not have been otherwise than a floral monstrosity discreditable to all concerned.

This is the season when you can kill indoor



AN INDOOR GROVE OF ARAUCARIAS
OR CHRISTMAS TREES

plants by overwatering. Many a plant goes that way. The same thing may cause rot in lettuce under glass, and especially if air is unduly withheld.

The MAGAZINE exists to help along in gardening matters. It wants to help you and also your neighbors. The more subscribers it has, the more valuable it can be made. Isn't that an inducement to interest many of our readers in the matter of getting friends and neighbors to subscribe. Thousands would be glad to subscribe if they were introduced. Thanks in advance.
E. A. LONG.

SEED PODS.

Christmas tree fruits are ripening fast.

Scarlet-flowered and bright-berried plants are cheeriest for winter.

In the South Atlantic region both holly and mistletoe are well berried.

One of the most acceptable Christmas gifts is a pretty plant in a neat pot.

Can some one give the proper name and culture for the delicately lovely white "rice lilies" of the south?

The Japanese anemones slept through our

Heavy gifts can be heaped about its base, covering the pot or jardiniere.

What a brilliant surprise in late fall is the scarlet nerine flower, springing up so quickly all unheralded by even a single leaf! The flower clusters are like stiff, airy, little pompons or aigrettes of single threads. The plants are hardy here.

The white lilac is not so free blooming as the purple one, and in rich, moist, alkaline soils it sometimes produces only new growth and foliage. Removed to a sunny place, where the soil is dryer and poorer, the wood ripens better, insuring a setting of buds in autumn.

Through the long winter months a compost heap prepared from alternate layers of sods and barn-yard fertilizers can be slowly decaying and mellowing into fine condition for use in spring, when it will be much needed. Do not neglect to prepare one.

The holly trees of the south frequently seem to fruit themselves to death. Their berry clusters are massed together in great scarlet knobs all over the trees every year. By and by the tree's waning vitality shows in the curling, yellowing leaves and the gradual dying off of the lower branches. I have seen them freshen up wonderfully after an application of fertilizer to their roots in fall.

The scarlet-flowered anthuriums are among the handsomest and most useful plants that one can grow for winter cheer. Their rich spathes will glisten for months amid the dark green foliage of plants which have no flowers,—palms, ferns, etc.—lighting them up wonderfully. And there is no cheap tawdriness about their brilliant color. They are glossy aristocrats that fear no degrees of comparison.

My little nephew's gourd crop in the garret is a curious and interesting one. Such queer, quaint shapes and stripes and splashes of bright color! Useful, too, in many ways. Some use them for dippers, salt and soap vessels; mother and sister plant hyacinths and tulips in the larger ones, cuttings in the small ones; those with long handles are hung or tacked about the eaves for bird homes.

L. GREENLEE.

* *

MYOSOTIS PALUSTRIS, forget-me-not, makes a pretty pot plant, but requires plenty of water.



A BENCH OF FOLIAGE PLANTS
WITH ANTHURIUM CRYSTALLINUM
IN THE FOREGROUND

five months of drouth and did not uncurl their waxen-white before mid-October.

Our Parma, California, and Princess o Wales violets began blooming about the middle of September and have kept it up bravely ever since.

The stiff-branched little firs of our mountains make elegant little Christmas trees. They are much like the araucarias in appearance, but cost not one-fifth so much.

A fine araucaria may be used without injury as a Christmas tree if decorated carefully with light ornaments, candles, wreathing, etc.



NATURE STUDIES FOR YOUNG PEOPLE.

*The river was dumb and could not speak,
For the frost's swift shuttle its shroud had spun;
A single crow, on the tree-top bleak,
From his shining feathers sheds off the cold sun.*
—Lowell.

Our object is to sharpen the eyes, and foster a love for the study and protection of our birds, our wild flowers, and all those gifts which Mother Earth lavishes upon us if we know where to seek them.

We have organized a Club among our young readers to assist them in this Nature Study. For particulars see VICK'S VOLUNTEERS in back part of the MAGAZINE.



OUR BLACK-COATED NEIGHBOR.

In Santa Claus' month we love and expect that all things out of doors shall be white.

That means plenty of sleighing and coasting, snow-balling and skating. But while we are merry and know that our dinners and suppers will be ready for us in a warm and cozy house, and that at night we shall lie snug under warm blankets, how do you suppose our neighbor in the black coat likes it?

"What neighbor, you ask?"

Why our friend, Brother Crow.

I hear you say, "Oh, I know all about the crows," but do you? Have you ever noticed his wings, as he flies along over head? See how they are cut in points, "saw-toothed," it is called.

Perhaps you call him an ugly bird, but wait till you see him near at hand and watch the changing color on his neck and head, and down upon his body.

This is called iridescent, it means "changing like a rainbow." Many birds have it, and in the crow the violet and green are the most marked shades.

Crows are like children, they do not like to be alone. They live in companies, building their nests near together, and fly in flocks.

Every morning from my window I see five crows flying toward the south, every night I see them coming home.

Who can tell me why they do this?

Crows could teach us in many ways. I thought I should surprise you.

Let me tell you two or three. They do not quarrel among themselves. Sometimes children do. They are affectionate; the parents are devoted to the children, and the old crows mate for life. If a mother bird is killed, the other crows help the father to feed and take care of the little ones till he finds a new mate.

This he does very quickly, for in every flock of birds there are always one or two who have no families of their own so that they may take the place of any who are killed.

Besides the warm coat of black feathers crows have another provision against the cold. Underneath the skin is a covering of fat sometimes half an inch thick, which grows during the summer when food is plenty. If the winter is very cold and food scarce, this fat is absorbed, and it goes to nourish them, so that often in the spring they are very thin.

Not only crows have this layer of fat; hawks and owls have it too, and other birds that spend the winters in cold climates.

Crows sometimes build nearer the house than is pleasant, for they are very early risers, and the young birds are very hungry, nearly all the time. If you put a stuffed owl or hawk in the tree where they are, or where they can see it, they will leave that neighborhood, and come back no more.

Though the crow may be deceived by a stuffed bird, he is very intelligent. With that single caw-note they manage to vary it so that



EGG OF THE CROW
Natural size

it represents to their ears, orders, watchwords, warnings, in fact the whole crow language.

Farmers do not like crows because they eat corn and seeds. They do damage in this way, but then think how much good they do in the spring, particularly by eating worms, and the grubs and eggs of insects that would do more harm than the birds themselves. The farmer often forgets this.

During the summer a crow usually eats what would mean half a pound of meat a day! It is not really meat, but these same bugs and worms I've been telling you about.

Sometimes when the hunting is good they get a field mouse or a frog; then they do make a meal indeed.

And now for the very worst thing about them. Worse than stealing corn. They rob bird's nests, eating the young birds and the eggs. They do this for their food, and surely



A CROW'S NEST

may be more easily forgiven than the boy who takes eggs or kills the lovely little songsters with pop-gun or snapper "just for fun."

The crow's home is a nest of very rough sticks. They are attached to it, just as we love our home. Year after year they return to it, patching and repairing, with sticks and grass, so that many broods are raised there.

Who has seen a crow's egg? What color is it, who can tell me?

Crows are not very brave. They fear their enemies, the hawks, yet only a few weeks ago I watched three crows fairly drive into the woods a broad-winged hawk. They flew at him cawing shrilly, and each as it passed him gave him a sharp dig with its beak. It seemed as if they had learned a lesson from the kingbird, who treated them the same way earlier in the summer.

One little kingbird will put to flight half a dozen crows if they come too near the cherished nest, or intrude on his hunting grounds.

Have you ever watched the crows yourself or heard your friends tell any stories about them or their ways?

I should like to hear some stories of birds, and want my little friends, Vick's Volunteers, to send me some. If they are new and interesting I should like to publish the best one here. You must write them out yourself, and do not make them too long. I shall begin with my story, and shall call it

DO CROWS TALK?

Driving one day on a road beside a narrow river I saw, in a field ahead, a large gathering of crows. They were making so much noise that they could be heard long before they came in sight. I stopped to see what they would do. They had evidently talked matters over in the field. Each captain was to lead his flock.

Perhaps the food supply had given out, or they were going to select a new home for the winter. In a moment a company rose in the air, flying low. Its captain flew ahead, and behind him came two or three crows who acted as lieutenants, and the rest to the number of a hundred or more straggled behind in long lines.

They headed towards the east, which brought them towards me. Suddenly the captain spied me. "Caw-caw-caw," cried he and turned to head the regiment across the river. Over there some men were repairing the roof an ice-house. As the birds headed that way one of the men began hammering. Immediately Captain Crow shouted "caw-caw." Down the line flew the lieutenants "caw-cawing," evidently repeating orders, and the captain began to circle slowly in the air, each time rising higher and higher. The whole flock circled, mounting high in air, passing at a safe distance over the ice-house.

This regiment was hardly over when a second appeared. This had its officers like the first one. They pursued the same course, headed toward the east, saw me, turned to cross the river and were alarmed by the carpenters. Then the captain gave his orders, the lieutenants passed them down the line, and the flock rose in circles and flew along taking the same direction as the first.

This was repeated four times. In all nearly a thousand crows passed. Each captain gave his orders, and they were as plain as if he had spoken, "These dangers must be passed by rising high in air." Yet to my ears it only sounded like caw-caw-caw!

NANNIE MOORE.

SEEING WITHOUT EYES.

We have all been called upon to consider the folly of those who "have eyes and see not," but the case before us is an entirely different one, for here are individuals that see, but apparently have no eyes at all.

Poe tells of a visit, made by His Satanic Majesty, in the guise of a gentleman whose chief peculiarity of appearance was a pair of green goggles. When the goggles were removed, his astonished host saw there were no eyes under them, and was told that eyes were quite unnecessary, that it was easy enough to perceive things without them.

There are many creatures among the lower forms of animal life that apparently have a similar faculty of knowing about their surroundings without the aid of anything that we usually call an eye. In some forms any part of the body may be used to distinguish between light and darkness. The *amoeba* has no organ that can be called an eye; every part of it serves equally well for the perception of light and it shows by its movements that it can even distinguish between lights of different colors, stopping in white light, starting up again in red light and going away in the opposite direction when yellow light is thrown upon it.

The common angleworm, which from its desirability as bait presents such strong claims to the regard of the small boy, and which from Darwin's account of its usefulness is entitled to the respect of all, is very quick to perceive light.

For a long time it was thought the worms became aware of the approach of an enemy by the jarring of the ground alone; then someone who went to get worms in the dark found that if he stood perfectly still the worms would still try to hide as soon as the light from his lantern fell upon them. Careful search with the microscope revealed the fact that most worms have small organs that serve for eyes, all over their skin. These rudimentary eyes are merely pits sunken in the epidermis and covered with a bit of thickened cuticle, which being nearly transparent serves as a kind of lens for concentrating the rays of light on this spot, just as a sun-glass held in the sunlight will bring the light rays to one spot on a paper held under it. The pit forming the so-called eye is lined with cells that have a little pigment under them and are connected with the brain by a nerve, just as our own eyes are. Sometimes there is a large number of cells in one of these eyes, but they vary, and there may be only a few cells, or even one cell may serve the purpose. When there is only one cell part of it is formed into something like a lens, that will refract the light just as the larger lenses do.

What the worm lacks in the complicated structure of its eyes is made up in number. They are so small that it is not easy to estimate how many there are, but as many as five hundred have been counted in one worm and it is quite possible that some of them were overlooked even at that.

They are arranged in different ways in different kinds of worms, although worms of the same kind always have their eyes placed in the same way. They are always distributed over the whole surface, but they are usually more numerous in the head and there may be a large number in the tail, then they may be massed together in certain places in each segment of the worm, or they may be disposed in the different segments without any apparent regularity. Some aquatic worms breathe by means of slender filaments that float out like fringe in the water, and their blood is purified by flowing through the filaments just as the blood of a fish is purified by passing through its gills. Worms of this sort often have eyes at the base of the filaments as well as in other places. There are eyes over the top of the body, and underneath, for a worm that swims in the water is just as much interested in what is beneath it as in what is above, and like the Hundred-Eyed Argus of mythology, it is prepared to look in all directions at once, so that an enemy stealing up from the rear would be discovered just as easily as any other.

Eyes of this sort are so different from our own that we can only guess at what their owners see with them. It is hardly possible that they can see outlines as we do; an elephant and a tree would probably look alike to such a creature, but differences in the amount of light, or perhaps something of the nature of the things nearest, can be distinguished.

Leeches in the water will notice shadows falling upon them, and in this way they probably find out when anything upon which they prey swims over them. It would be of little importance to a worm to see many of the things that we see, but the visual organs provided are good enough to find hiding places with and to answer all practical needs of the worms, while a finer eye might be superfluous, or perhaps a positive disadvantage. If a worm gets cut or bitten in two, what faculties it has are so impartially given to all the parts that the tail piece is able to seek a dark, damp place, where it will be sheltered till a new head grows, in case it is the kind of worm that is able to develop a new head in such an emergency. Occurrences of this sort are common among worms, but many of them are fortunate in possessing the power of regenerating lost parts of their bodies, even when the loss involve such an important portion as the head. E. M. B.

LETTER BOX.

Let me have audience for a word or two.
—Shakespeare.

Mildew on Roses.

Mrs. L. F. S., Albaugh Center, Vt. The rose leaves are affected with mildew. Dust them with sulphur or spray with a solution of sulphide of potash, one-fourth ounce in a gallon of water.

* *

Purple Dahlias.

In this department last month, in answer to an inquiry, it was stated that there are no blue or purple dahlias. This statement is true in relation to blue, but quite a number of varieties are described as different shades of purple.

* *

A Basketful of Fresh Eggs.

I suppose you have received so many compliments by this time upon the improvements in your MAGAZINE, that it will be safe now, to add my compliments to those of hundreds of others, without bursting you with flattery. I am reminded of Josh Billings' toast, "Woman, she is a good aig." The V. I. M. is a whole basketful of fresh eggs, not one spoiled, not one cracked.

You will have to sit up nights if you improve it much more.

DR. H. DUNHAM.

* *

Rose and Lily Troubles.

1.—What causes the leaves on roses in the garden, through the summer, to turn black and fall off, leaving only a few at top? Is there a remedy?

2.—A large bunch of Candidum lilies has been growing smaller for several years, and the number of flowering stalks fewer, until this year, when we had none at all. They have been moved once in the time. What more could be done?

M. L. C.

Winsted, Conn.

1.—Roses in the open ground are subject to a number of fungous diseases affecting the leaves and causing them to fall. One of the most common of these is what is known as black spot or leaf blight. The disease appears most frequently in a season of prolonged rainy and cool days, or on grounds that are too moist and which would be benefited by under-draining. When the soil is not at fault but the trouble is due to weather conditions, something can be done in the way of prevention by the use of copper fungicides, commencing their use early in spring, and repeating the spraying about every two weeks during summer. Bordeaux mixture is effective, but if the blue color left on the leaves is objectionable the ammoniated solution of copper carbonate may be employed. This is prepared by dissolving two ounces of copper carbonate in one quart of liquid ammonia of highest strength and diluting to thirty-two gallons.

2.—It would be necessary to learn all about

the lilies to form a correct opinion in regard to them. Probably the easiest way out of the trouble would be to procure some good, healthy bulbs and plant them where lilies have not before been grown.

* *

A Gratifying Letter.

This morning I received the November number of VICK'S MAGAZINE. Though I have taken it only a year I think it one of the best of the monthly flower publications and entirely lacking one feature which seems to me rather noticable in some others of this class,—i. e., the repeated writing of short descriptive articles which seem to be made up from the catalogue descriptions, with the apparent intent of advertising goods offered for sale. VICK'S MAGAZINE appears to me to be a *bona fide* flower and fruit magazine. The new form makes it more convenient and attractive. The department of Nature Study and the proposed Vick's Volunteers promise great results among younger readers, and that too along lines well worthy of being "pushed." May these department greatly help in the development of "Sharp Eyes" in large numbers of them!

Though I have but a small city back yard for garden space, I am much interested in the domestication of our native wild flowers, and have had more or less satisfactory results with the following: Bloodroot, hepatica, Solomon's seal and bellwort, ginseng, Canada snakeroot, columbine, trillium, mitrewort, false mitrewort, jack-in-the-pulpit, wild iris, wood lily, swamp lily (Canadense), thoroughwort, cardinal flower, great blue lobelia, turtle head, several ferns, Clematis Virginiana and C. verticillaris and the following orchids, Cypripedium spectabile, C. parviflorum, C. pubescens, Habenaria psycodes, H. hyperborea and H. orbiculata, Orchis spectabilis, Goodyera pubescens, Aplectrum hiemale and Liparis liliifolia. One "wild bed" two by three feet gives the following succession: Trillium grandiflorum, Lilium Canadense and Lobelia cardinalis. I have photographs of several of these and will be glad to send them on to you if you care for them or think you can use them at all in illustrating the MAGAZINE.

Now a question: A year ago in dividing roots of Peonia officinalis rubra (in another garden) I found the roots infected with nematode galls similar to the "eel worm" of rose roots. Soil dry clay loam, lacking in vegetable matter. I cut off the most infested rootlets and transplanted part of clump to rich sandy loam, with considerable wood soil and in moist, shady situation. Can you suggest better or further treatment? The disease is evidently uncommon in peonies.

HORACE W. BRITCHER.

It is a satisfaction to be assured that our efforts in making an interesting and useful garden publication are appreciated. Letters of this kind give encouragement to go on in the course we are pursuing.

The subjects of our native flora have always received attention in our pages, and we shall endeavor at all times to give them due consideration. It will be a pleasure to receive the photographs mentioned together with a few notes in explanation of them.

The treatment of the peony roots was as good as can be suggested.

FAMILY COZY CORNER.

*Some said, "John, print it"; others said "Not so."
Some said "It might do good"; others said "No."*

—Bunyan.

Some Plants I Have Seen.

We may have many plants but unless well grown they do not attract admiration. I can recall some particular plants I have seen with vivid pleasure. One lady had an east window. In it she had half a dozen coleus, which she seldom turned, and they grew up above the second sash and clung close to the pane. I never saw coleus which appeared so effective as those did from the street. One evening she had a tea-party, and turned the coleus toward the room. All the visitors exclaimed over them, and one with brilliant faculties, asked her how she made them grow toward the room. The hostess smiled blandly, but did not explain, thinking, I dare say, that any one who could ask such a senseless question, was not seeking after information.

Another lady had two cacti, one a night blooming cereus and one which was similar, but day blooming. She had had them thirty years, and they grew in a box with a trellis attached. The trellis was ten feet tall, and they had grown above that, and the stems had been bent downward. They were a magnificent sight and always bloomed.

Another lady had a moderate sized bay window filled with a fern. It stood on a pedestal eight feet high and the fronds fell almost to the floor. It was like a big, drooping tree, so immense in its dimensions. Think of the care and time she had given it.

Another magnificent plant was a rubber tree. This grew so tall that its owner was obliged to give it to a school, where it stood in the hall, and reared itself to a height of twenty feet. It was in one straight tree with no branches. One in a store window was about as tall and branched. The leaves all grew toward the light, and it was very showy.

A little telegraph operator had a west window and in it she grew *Achyranthes cæsi* to enormous proportions. It stood in a box and was six feet high and as much as four feet wide. It completely screened her window.

Occasionally one sees a German ivy of noticeable dimensions. One lady had hers draped over two or three windows and doors, and then festooned across the ceiling. It must have been in position for years.

We all know what a hoyia will do with years. Once I saw a perfect specimen of one. It stood in a corner between two windows, and was woven upon a trellis about eight feet high. It presented one mass of waxy leaves toward the room. The light from the windows drew the growth equally forward. It bloomed regularly.

It is generally noticeable when such fine specimens are seen, that the owner has no other plants, but concentrates the care upon one plant. The result certainly is satisfactory.

GEORGINA G. SMITH.

* *

Climbers in a Cold Climate.

Vines add that finishing touch of grace and beauty to a building that lace does to a woman's dress.

Among the hardy climbing vines the clematis holds a secure place. When established it is perfectly hardy. It requires a well drained, light, rich soil. If the ground where it is desirable to plant clematis vines is heavy and clayey, dig a basin nearly the size of a half hogshead, fill in a foot or eighteen inches deep with stones and rubbish, mix sand, leaf mold, old fine manure, with the clayey soil in about equal parts and fill up with this mixture, and you will have an ideal home for the plants. Give something for a trellis and do not do any "bossing" as regards its climbing, but let it wander at its own sweet will.

In the fall cut down to within two or three feet of the

ground, place over the roots a liberal blanket of old manure, and over this some leaves or clean straw, bend down on the covering the remaining stems of the plant and cover them with straw or leaves, holding the latter in place with boards or evergreen boughs. In the spring remove the covering, tie up the plants to their support, work the manure well into the soil, and your plants are ready for their summer's work.

Remember that vines, during active growth, will take care of liberal quantities of water, particularly in well drained locations.

The average season's growth of the clematis is from eight to fourteen feet, making it an ideal covering for porches, pillars, verandas, fences and unsightly stumps and rock heaps.

Another well known climber is the honeysuckle, and for planting it may have prepared a place similar to that described for clematis. If trained against a building it will need to be kept in place by loops of leather nailed to the walls. If given a trellis of woven wire or similar material I think it will find a way to attach itself to the same with but very little assistance.

I prefer the loops of leather, as the honeysuckle is not cut back in fall, but in this climate the whole plant is laid down and well covered with brush or leaves and is more easily taken down when fastened with loops.

After working a liberal quantity of fine manure into the soil about the roots in spring, mulch heavily with well rotted chip dirt. A goodly supply of the weekly wash water can be given the plant with good results.

If the blossoms are closely picked and none allowed to go to seed, the plant will remain in bloom for a much longer period. While on the other hand if none or but few of the blossoms are cut, the plant will be thickly set with clusters of brilliant red berries, that will remain on the plant until cold weather.

While the honeysuckle is perfectly hardy, it is best not to be in too great a hurry about putting it up in spring. Remove the winter covering and leave the plant lying on the ground or on boughs for a few weeks. I once nearly ruined a large fine plant by putting up on the sunny side of the house, immediately after removing its winter covering. It was during a "warm spell" in early spring, and it was in such a warm and sheltered place the leaf buds almost immediately commenced growing, and in a very short time the leaves were beginning to unfold. The "warm spell" was followed by a corresponding cold one with a long cold rain storm, so, between my haste, the heat, and the cold, I had no blossoms that season, and very nearly lost my plant

Maine.

D. L.

* *

Enthusiasm All Aglow.

I have just received your MAGAZINE and am delighted with it; it is full of instructive interest. The roses give me a feeling of envy, for I never succeed in getting anything so perfectly lovely, although my Moss roses were beautiful.

My rose plants that I procured last spring did not do well and they were so great a disappointment to me that I declared it would be the last money spent for flowers, but when the October and November numbers of the MAGAZINE came my enthusiasm was all aglow again, notwithstanding I am an old woman and one of your father's early customers.

MRS. L. F. S.

* *

WINTERING CANNAS.—My cannas, taken up with soil attached, are now in a box with sand mixed between them, and in a frost-proof cellar.

F. G.

EDITOR'S NOTES

California Walnuts.

The walnut crop of California this season is estimated at 470 carloads. Nearly half of the whole is produced in Orange County. It is thought that next year there may be from 800 to 1,000 carloads.

* *

Francis William Loudon.

Since writing the brief notice of Mr. Loudon and his work which appears on another page, in this issue, the news comes of his death at his home, Janesville, Wisconsin, October 2, 1899, in the eighty-first year of his age. His name will remain a cherished memory to American horticulturists.

* *

Peter M. Gideon.

The death of this veteran horticulturist, at the age of 79, occurred at his home, Excelsior, Minnesota, October 27, 1899. Mr. Gideon for nearly fifty years past had given constant attention to the raising of seedling apples in order to secure varieties suitable to the conditions prevailing in Minnesota and similar regions. Among other kinds, he originated the Wealthy Apple, a variety so valuable to all northern regions that it will remain indefinitely as a memorial of his skill, patience and perseverance in horticultural work. For many years he had charge of the Minnesota State Experiment Farm.

* *

Memorial of Joseph Albert Lintner, Ph. D.

The New York State Museum issues Bulletin No. 24, of Volume 5, as a Supplement to the fourteenth report of the State Entomologist, 1898. This bulletin is a "Memorial of the Life and Entomological Work of Joseph Albert Lintner, Ph. D. State Entomologist, 1874-1898. The preparation of this work has been made by the present State Entomologist, Ephraim Porter Felt, D. Sc., and is issued under the supervision of the University of the State of New York.

A brief and appropriate account is given of Dr. Lintner's life and work, together with a list of memberships of learned societies with which he was connected. Then follow a list of new species described by Dr. Lintner, and a bibliography of his entomologic publications, and a complete index to entomologist's reports one to fourteen, forming a key to all the State entomologic publications while Dr. Lintner was in charge of the office. This index is of great value both to scientific and economic entomology.

* *

Violet Culture.

Under the title of "Commercial Violet Culture" Professor B. T. Galloway, of the Department of Agriculture, has prepared a small volume of 224 pages, in which the whole subject of violet culture is critically examined and treated. All the particulars in relation to the culture of this favorite plant are clearly and minutely set forth; these include accounts of the best varieties, the proper soil, the construction of houses and frames, the water supply, propagating, selection of stock, planting, watering, syringing, mulching, feeding, temperature conditions and ventilation, handling and marketing the crop, diseases and insect enemies and their treatment, and a chapter on the cost of production and profits. This last chapter will be regarded by practical growers as somewhat optimistic, but it may serve to encourage a novice whom difficulties in the practical work of violet growing might tend to discourage.

The treatise is splendidly illustrated throughout, and in relation to each branch of the subject. The very clear, careful, explicit and practical manner in which every detail

is described and explained leaves no doubt on questions to arise, even to one wholly ignorant of the subject, in fact the writing is a model of strong, lucid and terse statements applied to a comprehensive grasp of minute particulars. The author is fortunate in having publishers as faithful in the mechanical execution of the volume as he has been in the literary work. It is published by the A. T. De La Mare Printing and Publishing Company, Ltd., New York. Price \$1.50. It is a trustworthy guide to violet growers.

* *

Meetings of Horticultural Societies.

The annual meetings of the State Horticultural Societies will, for the most part, be held during the three winter months. The time of the meeting of the Northern Illinois Society is November 28th and 29th. The Northeast Iowa Horticultural Society's place of meeting is Cresco, Iowa, and the date November 26th, 27th and 28th. Other societies will meet as follows:

Illinois; Springfield, December 26, 27, 28.
Indiana; Indianapolis, January 3, 4, 5, 1900.
Iowa; Des Moines, December 12, 13, 14, 15.
Southwest Iowa; Logan, December 19, 20, 21.
Maryland; Baltimore, December 6, 7.
(Maryland) Peninsula; Salisbury, January 10, 11, 12, 1900.
Michigan; Holland, December 5, 6, 7.
Minnesota; Minneapolis, December 5, 6, 7, 8, 9.
Missouri; Princeton, December 5, 6, 7.
Central Missouri; Boonville, December 2.
New Jersey; Trenton, January 3, 4, 1900.
(New York) Eastern New York; New York, February 7, 8, 1900.
(New York) Western New York; Rochester, January 24, 25, 1900.
Ohio; Newark, December 6, 7, 8.
Ontario Fruit Growers; Whitby, December 5, 6.
Pennsylvania; Pittsburg, about middle of January, 1900.
Rhode Island; Providence, January 17, 1900.
Vermont; Burlington, December 12, 13.
Wisconsin; Madison, February 5, 6, 7, 8, 1900.

* *

Chrysanthemum Exhibits.

During the past month many flower shows have been held in different parts of the country, and the displays of Chrysanthemums have been prominent features. From the brief published reports of these shows a list of some of the favorite and prize-winning varieties has been gathered. On account of the incompleteness of the reports the list is but an imperfect one, but it may be acceptable as far as it goes, as showing some of the leading and most highly prized varieties, in the different colors.

BRONZE.—Boule d'Or.

PINK.—Vivian-Morel, Mrs. Perrin, Sing Sing, Pembroke, Garden Queen, Mrs. Murdock, Symphonia, Helen Bloodgood, Autumn Glory.

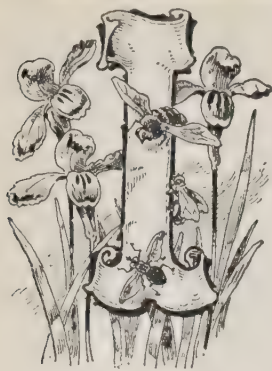
RED.—G. W. Childs, John Shrimpton, Black Hawk, Cullingfordii.

WHITE.—Ivory, Evangeline, Fée du Champseur, Mayflower, Mrs. H. Weeks, Mutual Friend, Queen, Silver Wedding.

YELLOW.—Frank Hardy, Georgiana Pitcher, Golden Wedding, Major Bonnafon, Minerva, Modesto, Mrs. J. J. Glessner, Mrs. Morgan, Mrs. T. L. Park, Mrs. Pullman, O. P. Bassett, Peter Kay, Pennsylvania, Philadelphia, Yellow Carnot, Yellow Fellow.

At the Chicago show one of the most striking plants was a fan-trained specimen grafted with twenty-two different varieties, and all of these were in bloom at the same time.

At the exhibit of the Philadelphia Horticultural Society the greatest curiosity was a chrysanthemum trained in fan shape and which was fully twelve feet in breadth at the widest point. It was the yellow variety Modesto.



IT IS A GREAT PLEASURE to announce to our many readers that PROF. L. H. BAILEY of Cornell University, author of 'The Horticulturist's Rule Book, Plant Breeding, The Pruning Book, Lessons with Plants, Garden Making, etc., has consented to give us a short talk each month.

Prof. Bailey's writings are attractive, clear cut, practical and right up to date. Every person interested in Flowers, Fruits, Plants or Vegetables will not only profit by, but enjoy reading these articles.

A Word to New Recruits.

Although the call for Volunteers was issued only last month, we are glad to find that we have recruits standing at arms in many sections of the country. To Pueblo, Col., to Red Lake Falls, and Mankato, Minn., to Ada, Ohio, and to members of the regiment in Massachusetts, Rhode Island, New Jersey and New York, we send "Greetings." Let us hear from you again. Tell what you notice at your different homes. Call out the great body of reserves among your friends, interest them too, so that we may all learn to love each living thing, and know their haunts and habits.

We want one or two bright boys or girls in each town to act as agents for VICK'S MAGAZINE. We can make it an object for any one to take subscriptions. Several boys have earned money for Christmas with very little effort. Write for particulars.

I greatly appreciate the changed form and increased merit of the MAGAZINE, which has always been at the head of the list of floral magazines with me.

London, Ont.

REV. W. J. FORD.

Having purchased a greenhouse, I am anxious to put myself in touch with the latest ideas and information concerning the business, and thanking you for past favors I herewith enclose the price of subscription to your excellent MAGAZINE.

G. W. S.

Angola, N. Y.

I find VICK'S MAGAZINE very interesting under the new management. In the October number the article "October Woods and Waysides" was almost as good as a walk there one's self.

M. D. C.

Canandaigua, N. Y.

I shall try to send some new names in soon. I think we have all got our money's worth in the past without any premiums. I think it the best magazine of the kind I have ever seen, and I have taken several.

Nashua, N. H.

MRS. J. D. T.

Clubbing Rates in the United States and Canada.

We will furnish Vick's Magazine and any of the following publications for the amount shown in the second column:

	Regular Price	With VICK'S MAGAZINE		Regular Price	With VICK'S MAGAZINE
CENTURY MAGAZINE	\$4.00	\$4.00	COSMOPOLITAN	\$1.00	\$1.25
REVIEW OF REVIEWS	2.50	2.50	DELINEATOR	1.00	1.35
ST. NICHOLAS.. . . .	3.00	3.00	MCCLURES	1.00	1.25
SCRIBNERS	3.00	3.00	MUNSEY	1.00	1.30
HARPER'S MAGAZINE	3.00	3.00	PURITAN	1.00	1.30
HARPER'S WEEKLY	4.00	3.75	QUAKER	1.00	1.30
HARPER'S BAZAR	4.00	3.75	ARGOSY	1.00	1.30
GENTLEWOMAN.. . . .	1.00 . . . . .	.65	N. Y. WEEKLY TRIBUNE	2.50	1.75
N. Y. WEEKLY TRIBUNE	1.00 . . . . .	.75	WOMAN'S HOME COMPANION		
WOMAN'S HOME COMPANION	1.00 . . . . .	.90	AMERICAN QUEEN		
AMERICAN QUEEN . . . . .	.50 . . . . .	.80	OUR LITTLE FOLKS . . . . .	.75 . . . . .	.75

VICK PUBLISHING COMPANY, ROCHESTER, N. Y.

Vol. XV. BARRACK ROOM BALLADS.
Including Danny Deever and Mandalay.



AFTER
THE BATH.

Dainty clothes and tender skin
Need pure soap to wash them in.
Nurse and mother must be sure
Baby's bath is sweet and pure.

A child fresh from its bath in clean dainty clothes
is a suggestion of Ivory Soap. All dainty wash-
able things may be restored to their original
freshness without injury, by use of Ivory Soap.

Any person wishing an enlarged copy of this picture may mail to us 10 Ivory Soap Wrappers,
on receipt of which we will send a copy (without printing) on enamel plate paper, 14 x 17
inches, a suitable size for framing.

THE PROCTER & GAMBLE CO. CINCINNATI

COPYRIGHT 1899 BY THE PROCTER & GAMBLE CO. CINCINNATI

PLEASE ENROLL my name on the list of Membership of
Vick's Volunteers

*I hereby promise to send, at least once during the coming year,
 to Vick's Magazine something of interest that I have noticed in
 relation to Flowers, Plants, Trees, Birds, Insects, or Animals.*

Name

Post Office

Date State

Application
 for
 Membership
 in
 Vick's
 Volunteers.

The club started last month is doing finely. Those sending in their applications have shown great interest in the Volunteers, and promised to write of the birds, flowers or animals they have seen or cared for.

The object is to have every eye opened wider to the treasures in Nature's great storehouse.

In joining you will share the letters received from young people in every State in the Union, and we hope from our new cousins in Cuba, Porto Rico, Hawaii and the Phillipines.



There are no dues. Any subscriber or reader may become a Volunteer and be entitled to a membership button. We wish our young friends to correspond with us, and through us with each other. Such communications as are of general interest will be published.

The questions of members will be carefully answered. If a personal answer is required, a self-addressed and stamped envelope should be enclosed.

In fact we hope to make Vick's Volunteers an active, earnest organization, content in times of peace to learn how many unguessed forms of loveliness are all about us; or, at the call, make war upon the destroyers of our shade trees, our birds and our flowers.

All communications on this subject should be addressed to

Vick's Volunteers, 30 Triangle Building, Rochester, N. Y.

In making application to join Vick's Volunteers please fill out and sign the blank at the top of this page, cut it out and send it as above stated.

The names of the first ten will be published in the January number.



Why not grow these gems? You can. We supply everything for their culture: Plants, Pans, Baskets, Food Peat, Moss, and Manual of Culture, at moderate prices.

WILLOWMEAD GARDENS, East Orange, N. J.

SHOEMAKER'S POULTRY
 BOOK on



and Almanac for 1900, two colors, 160 pages, 110 illustrations of Fowls, Incubators, Brooders, Poultry Houses, etc. How to raise Chickens successfully, their care, diseases and remedies. Diagrams with full descriptions of Poultry houses. All about Incubators, Brooders and thoroughbred Fowls, with lowest prices. Price only 15 cents. C. C. SHOEMAKER, Box 857, FREEPORT, ILL.

\$100 - CASH PRIZES - \$100

We want an agent in every town to secure subscriptions for **VICK'S MAGAZINE**. In additions to the premiums offered below, which are all honest articles and needed in every home, we will pay

\$50.00 cash to the person sending largest list of subscribers before April 1, 1900

30.00 cash to the person sending second largest list of subscribers before April 1, 1900

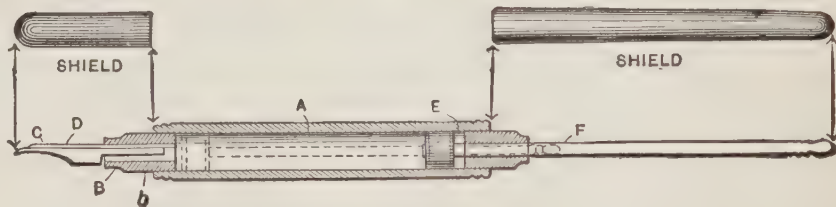
20.00 cash to the person sending third largest list of subscribers before April 1, 1900

If willing to act as agent write for particulars. We will make it an object for any person having a little spare time to work for this the oldest and best magazine of its kind in America.

Single subscriptions 50 cents per year. A club of five to one or more addresses for 40 cents each or \$2.00.

THE POST FOUNTAIN PEN

The Greatest Premium
ever offered to subscribers.



Cannot be bought for less than \$3.00, but we will mail one Post Fountain Pen and Vick's Illustrated Magazine one year for \$2.50

Six Cardinal Points:

Self-filling
Simplicity

Self-cleaning
Durability

No Leaking
Reliability



Used and endorsed by Ira D. Sankey, Gen. Lew Wallace, Bishop Vincent, Rev. Lyman Abbott, D.D., Com. Booth-Tucker, Dr. Josiah Strong, The Right Rev. Dean Hart, W. VanNorden, Esq., and thousands of other prominent men and women.

"I have used fountain pens for the last ten years, almost every description, and have no hesitation in saying in my opinion *The Post* is the best."

F. de Lantour Booth-Tucker

"I have tried every pen of the kind on the market and now unhesitatingly give the preference to the Post. It not only feeds itself with less care, has the immeasurable advantage of re-supply without inking the fingers. I do all my work with it."

Lew. Wallace.



Remember this is the only Self-cleaning and Self-filling Pen made.

No inky fingers.

No filler required.

No clogged and filthy pen.

A splendid present for father or mother. Every boy and girl attending school should have one; it will save the clothes and carpets from many bad spots. Almost a necessity when traveling.

We have made special arrangements with the owner of this patent which allow us to give VICK'S MAGAZINE for one year and the Post Fountain Pen for \$2.50, which is less than the pen alone can be bought for.

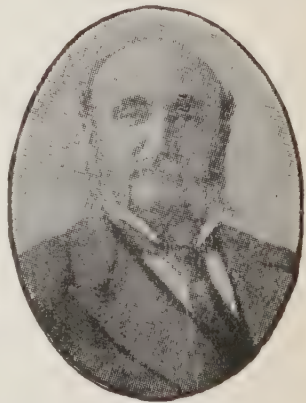
FREE We will mail a Post Fountain Pen free to any person sending ten subscribers to VICK'S MAGAZINE at 50 cents each.

"The pen is all you promised. I carry four fountain pens, and now the Post makes the fifth, and the fifth is by far the best I have—and all are good."

J. H. Vincent

"It never fails or gets cranky. One can at least have clean hands by using the Post, whatever the heart may be."

Ira D. Sankey.



Vick Publishing Company, 30 Triangle Building, Rochester, N. Y.

A PRESENT!

SEND us your address and we will make you a present of the best Automatic **WASHING MACHINE** in the world. No wash-board or rubbing needed. We want you to show it to your friends, or act as agent if you can. You can **COIN MONEY!** We also give a **HANDSOME WATCH** to the first from each county Address **Room 13 N. Y. LAUNDRY WORKS, 80 Murray St., N.Y.**

HOLIDAY GIFTS OF MUSIC

Before you buy a present send a postal card request for our special catalogues of music. They are full of suggestions for presents for singers, pianists, violinists, flutists, guitarists, mandolinists, banjoists, and music lovers.

Be sure that you mention the voice or instrument for which the music is wanted.

Catalogues are sent free.

The Latest Music by
Eminent American Composers.

MUSIC REVIEW.

Published monthly. Subscription 25c. a Year.
Send 2c. stamp for sample copy.

We solicit Orders for all Musical Publications.

OLIVER DITSON CO. MUSIC PUBLISHERS

OLIVER DITSON COMPANY - - - - BOSTON
CHAS. H. DITSON & COMPANY - - - NEW YORK
J. E. DITSON & COMPANY - - - PHILADELPHIA

R·I·P·A·N·S

Rest in peace and never suffer,
Is what Ripans Tabules say;
Pains and aches in head and stomach
Are by them soon cleared away;
Nothing like them to relieve you,
Safe to take them every day.

WANTED.—A case of bad health that R·I·P·A·N·S will not benefit. They banish pain and prolong life. One gives relief. Note the word R·I·P·A·N·S on the package and accept no substitute. R·I·P·A·N·S, 10 for 5 cents, may be had at any drug store. Ten samples and one thousand testimonials will be mailed to any address for 5 cents, forwarded to the Ripans Chemical Co., No. 10 Spruce St., N. Y.



GOOD FENCE!

Makes good neighbors. Why not have both when you can make the best for
20 to 35 Cents a Rod.
A little inquiry into the merits of our system of fencing will repay you handsomely. Write to-day for free Catalog.
KITSELMAN BROTHERS,
Box 291 Ridgeville, Indiana, U. S. A.

\$650 TO \$1,200 A YEAR and all expenses paid reliable men and women to travel and appoint agents; salary and expenses guaranteed and paid weekly. Send stamp for particulars.
The Bell Company Dept. E43, Philadelphia, Pa.

Notice our offer of
Kipling's Works,
on page ii.



TEA SET FREE 56 PIECES.

Full size for family use, beautifully decorated & most artistic design. A rare chance. You can get this handsome china tea set & one dozen silver plated tea spoons for selling our Pills. We mean what we say & will give this beautiful tea set absolutely free if you comply with the extraordinary offer we send to every person taking advantage of this advertisement. To quickly introduce our Vegetable Pills, a sure cure for constipation, indigestion & torpid liver, if you agree to sell only **six** boxes of Pills at **25 cts.** a box write to-day and we send Pills by mail, when sold send us the money & we send you one dozen Silver plated tea spoons together with our offer of a 56 piece china tea set same day money is received. This is a liberal inducement to every lady in the land and all who received the spoons and tea set for selling our Pills are delighted. **AMERICAN MEDICINE COMPANY, Dept. K 30 WEST 13th St., NEW YORK CITY.**

THE WING PIANO

Style 29, Concert
Grand Upright

The Style, Design, and Finish of Case of this Piano is more Elaborate and Elegant than that of any other piano made.

Description of Style 29.

7½ octave.

Double lever, grand repeating action.

Grand scale, overstrung bass, three strings to each note in the middle and treble registers.

The scale is the same as in grand pianos, with the largest size of sound board and strings of greatest length, thus giving the greatest volume and power of tone.

CASE double veneered, inside and outside.

Choice of superior Circassian walnut, rich figured mahogany, genuine quartered oak, and ebonized.

KEYS—Of best ivory and ebony.

Special Features and Improvements

Our special method of tone regulating (treating the hammers) insures great sweetness and singing quality of tone from the beginning and makes the tone more lasting. Our method of making the wrest plank of five thicknesses of hardest rock maple, and our extra heavy metal plate construction, give great solidity and strength, and cause the piano to stay in tune for a very long time.

The Wing Piano action is patterned after the perfected double lever, grand repeating action, to secure the greatest strength and power and greatest repeating qualities. Every note acts instantaneously and repeats perfectly, so that after a note is played the same note may be sounded again immediately without taking the finger from the key.

Wing Pianos have the following improvements, viz. "Built up" wrest plank construction; "dovetail" top and bottom frame case construction; full metal plate, with metal depression bar and metal supports for key bed; improved noiseless direct-motion pedal action; improved practice attachment; full-length duet music desk; carved panels; instrumental attachment.

THE INSTRUMENTAL ATTACHMENT

We desire to call special attention to this improvement. The instrumental attachment enables any ordinary player to imitate perfectly the tone of the mandolin, guitar, harp, zither, and banjo. Music written for these different instruments, with and without piano accompaniment, can be rendered just as acceptably by a single player on the piano as though played by a parlor orchestra.

PRICE We aim to make the best piano possible, and to sell it at the lowest price possible. Wing Pianos are not sold through agents. They can be bought in only one way—that is, direct from our factory. On account of the large number of pianos we sell our profits are small, and when you deal with us the difference between the actual cost of manufacture and the price you pay is very little. If you wish to buy a fine piano at a low price, write us.

Wing Pianos are made in five different styles at different prices, but all are uniform in quality. Every Wing Piano is guaranteed for twelve years against any defect in tone, action, workmanship, or material.

SENT ON TRIAL Freight Prepaid. We will send the above piano, or your choice of four other styles, to any part of the United States on trial (all freight paid by us), allow ample time for a thorough examination and trial in the home, and, if the instrument is in any particular unsatisfactory, we will take it back at our own expense. No conditions are attached to this trial. We ask for no advance payment, no deposit. We pay all freight in advance. Our object in offering these terms is to give every one an opportunity to examine the Wing Piano free of expense or risk.

Over 18,000 Wing Pianos manufactured and sold in 30 years (since 1868.)

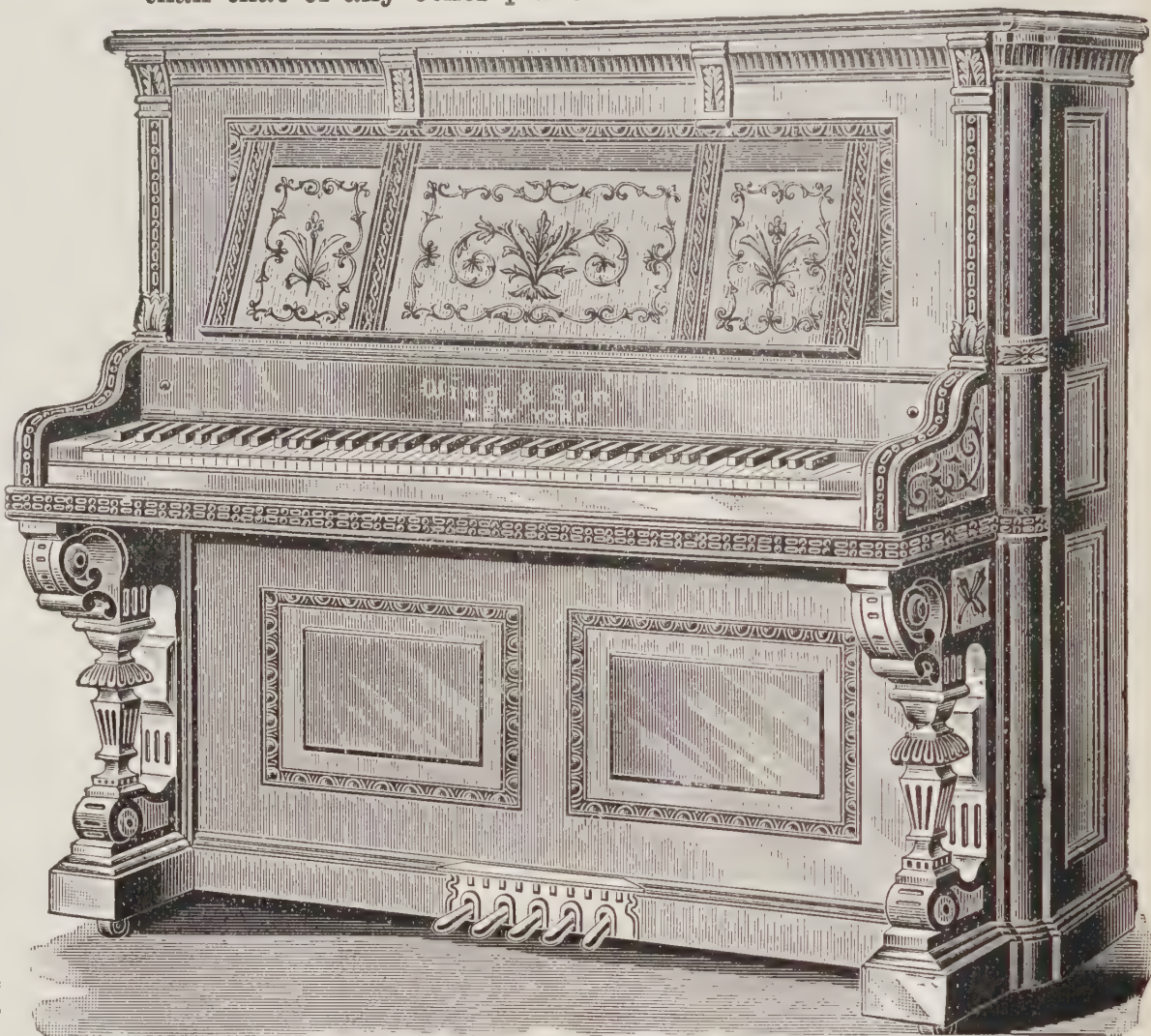
SPECIAL ATTENTION: We will send free on request "The Book of Complete Information About Pianos," 118 pages, handsomely bound in cloth. Nothing like this book has ever been published before. It is a complete library in itself. Every one who intends to purchase a piano should have it. Sent free on request with twelve (12) pieces of music.

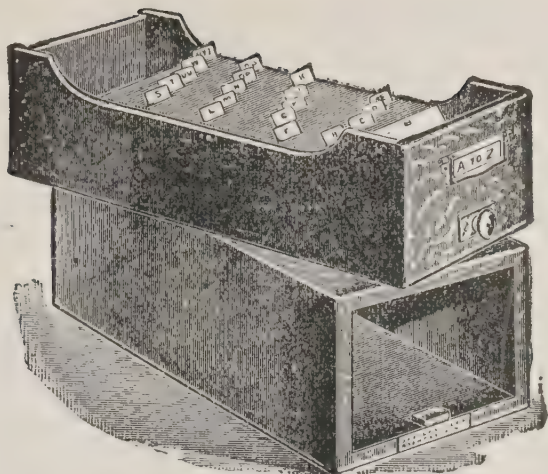
Old Instruments Exchanged
Easy Payments

WING & SON

1868—30th Year—1898

Nos. 239-241 East 12th St.,
New York City.





A Little Drawer

or a case of them—forms the basis of the greatest labor saver, and trouble saver and money saver known to modern business, the CARD INDEX System. Why not look it up? Costs nothing to find out all about it. Suits any business, helps everybody. Ever find confusion in your records, accounts, lists, memoranda? The Card System does away with all of it. Full particulars free; they really explain,

YAWMAN & ERBE MFG. CO.

SUCCESSORS TO THE OFFICE SPECIALTY MFG. CO.

Rochester, N. Y.

BRANCHES

NEW YORK, 349 Broadway CHICAGO, 9-13 Monroe Street
SAN FRANCISCO, 29 New Montgomery Street
TORONTO, Office Specialty Mfg. Co., Ltd., 77 Bay Street

ANGORA CATS. Pure bred; send for circular.
WOODBINE CAT KENNELS, 2508 Catalpa St., Louisville, Ky.

A GREAT COMBINATION!

We are offering herewith one of the greatest combinations ever made. Many of our friends have availed themselves of this opportunity, and others should at once take steps to secure these four journals.

The New York Weekly Tribune

is one of the best secular papers published. It has in it everything that a clean, strong, brilliantly conducted weekly should have, and everyone should take one New York paper. Single subscription per year \$1 00

The Woman's Home Companion

is full of bright things for women readers; gotten up in an artistic manner and contributed to by a more illustrious coterie of writers than any other ladies' paper. It is a beautiful journal, and no household in which there are growing girls or young wives and mothers, can afford to do without it 1 00

The American Queen

is one of the best edited and illustrated publications for women. It contains short stories by the best authors, home hints, fashions, how to dress well, etc. 50

Vicks Illustrated Monthly Magazine

tells how to utilize every square foot of ground, how to raise the finest vegetables, how to have beautiful lawns, pretty flower beds, house plants, etc., with an elegant colored plate in each number 50

\$3 00

We will send these three monthly magazines and one weekly paper, to any address in the United States or Canada, for about one-half the regular price **\$1.75**

VICK PUBLISHING CO., Rochester, N. Y.



INCUBATORS THE CYPERS.
One Style Only. **OUR BEST.**
Warranted to last Ten Years without repairs and to out-hatch during three trials any other incubator—bar none; **THIS OR YOUR MONEY BACK.** Built for business—sold on honor. 16-page illustrated circular and price list **FREE.** Poultry Manual and Catalogue No. 106 (160-pages, 8x11in.) entitled, "How to make money with Poultry and Incubators" sent postpaid for 15 cts. in stamps—worth dollars. Address nearest office.
CYPERS INCUBATOR CO.,
Chicago, Ill. Wayland, N. Y. Boston, Mass.

Catarrh, Croup, Bronchitis, Cold in the Head or on the Lungs instantly relieved and speedily cured by the

DAVIS FAMILY OINTMENT

Best household remedy ever sold for Burns, Cuts, Bruises, Chapped Hands or Lips, etc. Guaranteed. Money back if you want it. Three sizes, 10 cts., 25 cts., and 50 cts., prepaid. Circular free. Agents wanted.

The Davis Mfg. Co., 306 Boyce bldg., Chicago

MOTHERS

will find that the speedy cure for skin irritations, Eczema, Piles, Pains, Burns, Chilblains, Sprains, Swellings, etc., is GREVE'S OINTMENT, and when the children get hurt it stops the pain and heals the bruises. Nothing else so useful in the family. Get it today. Sold by druggists or sent by mail on receipt of 50 cts. by Hiscox & Co., Long Island City, N. Y.

Look over the Premium Offers, and send your orders at once. Premiums will be sent in time for Christmas presents.

Vick Pub. Co., Rochester, N. Y.

Vick's Garden and Floral Guide

containing all the newest and best in Seeds, Plants, and Bulbs for garden, house and farm, will be

Ready in January, 1900

OUR PLANTS are strong and healthy.

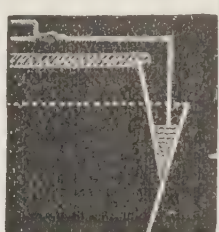
OUR SEEDS are of good vitality and true to name.

Catalogue mailed to all customers of 1899 without further advice; to all intending purchasers free on request.

James Vicks Sons Rochester N. Y.

Light. Portable. Will last a Lifetime.

HYGIENIC WATER-SEAL COMMUNE



Cross-sectional
View of Commode
showing Water-
Seal.

One-half teacup
of water complete-
ly seals the Com-
mode.

Indispensable in every Sick Room.

A Necessity in every Rural Home.

Indorsed by leading Physicians and Nurses.

The only Perfect Commode on the market.

Hospitals, Hotels, and all Public Institutions
need a supply of the

Hygienic Water-Seal Commode.

The **Water-Seal** renders it strictly odorless, and is a
safeguard against the escape of all germs.

Provided with disinfectant receptacle.

No more **dread** of contagious disease.

Made of best galvanized iron; dark color on outside;
weight 5¼ pounds; extreme height 13 in.; diameter 11½ in.

PRICE \$2.00.

Securely packed and sent by express. Purchaser pays
express charges.

Hygienic Water-Seal Commode Co.,

Como Bldg., CHICAGO, ILL.

Virginia Homes

You learn all about Virginia lands,
soil, water, climate, resources, prod-
ucts, fruit, berries, mode of cultiva-
tion, prices, etc., by reading the
VIRGINIA FARMER. Send 10c. for
three months subscription to

Farmer Co., Emporia, Va.

COPPER

12,000 Acres of Rich Copper Land.

**BOSTON & TEXAS COPPER CO.'S
GREAT SHOWING.**

The property of this company has been largely developed in
the last six months. Eleven mines and a territory of ten miles
square have been opened and tested. The ore and clay is
found so generally as to prove that copper exists in the entire
tract, evidencing millions of tons of copper marl, and large
bodies of ore, ranging from fifty to seventy per cent. It is
apparent that this property will turn out millions of dollars.

The shares of the company are being fast taken. Over
\$50,000 has been raised and put into the property in the last
three months, and the shares now offered at \$5.00 (par value
\$10.00) will soon be advanced, and ultimately will have a value
many times par.

Those who want shares should make immediate application
to the

**Boston & Texas Copper Company,
Tremont Building, Boston, Mass.**

It is officered by strong men, who have invested their own
money in the enterprise, and is managed by F. M. Spaulding,
one of the ablest and most reliable executive officers in the
country.

The company owns 12,000 acres in one tract and it has large
value for agricultural and town site purposes, outside of its
copper bearing qualities. Copper is near the surface and is
easily and cheaply mined and converted into metal, and no
expensive plant and machinery is required.

Those who want a choice and safe investment should make
their application at once.

THE MAGNIFICENT COLORED PLATE

of one of our native flowers and ferns given
in each issue of MEEHANS' MONTHLY, and
the descriptive chapter relating thereto, are
alone well worth the subscription price. The
painting by the world's greatest flower por-
trayer is botanically accurate and correctly col-
ored, and is executed in Prang's finest style.
The chapter tells, in a fascinating way, of the
full history and other interesting facts regard-
ing the plant illustrated.

MEEHANS' MONTHLY contains concise, interesting
and instructive articles on every branch of horticulture,
the improvement of the home grounds, etc. It teaches in
a pleasing manner. The style is not too technical and
is well calculated to create a greater love for horticul-
ture and nature in general. It is a magazine for the
amateur as well as the professional. Finely illustrated.

A good guarantee of its standard and of the character
of the articles in MEEHANS' MONTHLY is that it is
conducted by Thomas Meehan, the veteran scientist-
botanist and practical horticultural writer.

Subscription, Two Dollars a year. Send One
Dollar for six months' trial. Mention this maga-
zine and secure a copy free. No attention paid
to postal requests. For a 2c. stamp, we will
send a pretty booklet on hardy trees and plants.

THOMAS MEEHAN & SONS

Publishers

Station "G"

Germantown, Phila., Pa.



When corresponding with advertisers you will
confer a favor by mentioning this MAGAZINE.

FREE SILK DRESS

Full 10 to 15 yards of beautiful silk. Black, brown, blue,
green or pink, in light or dark shades. Here is an honest advertisement. No beating around
the bush. We make our offer of a silk dress free in plain English & we guarantee to send it
with a solid gold laid mercury diamond breast pin which we give absolutely free to every person an-
swering this advertisement who will send only 6 boxes of our Positive Corn Cure at 25 cts. a box. If you
agree to do this, order salve to-day & we will send it by mail, when sold you send us the \$1.50 and we
send you this handsome present exactly as we agree same day money is received. We make this ex-
traordinary inducement to convince you that we have the best Corn Cure on earth. There is no chance
about it, if you comply with the offer we send you; the silk dress will be given absolutely free full 10 to 15 yds. any
color you desire. Don't pay out your good money for a handsome dress while you can get one free for selling our
wonderful Remedies. Address at once **MFR'S SUPPLY DEPT K** No. 65 Fifth Ave., New York City.



MOST WONDERFUL BOOK of the age

FREE

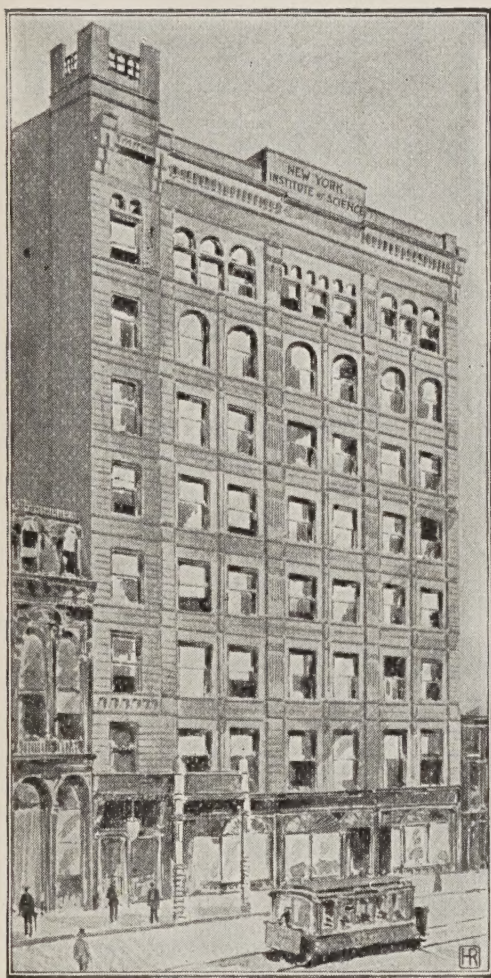
By the famous Writer on Occult Sciences
X. La Motte Sage, A. M., Ph. D., LL. D.

*Formerly Professor, Pierce's College,
Philadelphia, Pa.*

New York Institute, New York City.

100 Pages.

Profusely Illustrated.



This work instructs you how to thoroughly master all the secrets of **Hypnotism, Mesmerism, Personal Magnetism, Magnetic Healing, and other Occult Sciences.**

Quickest and Surest Methods on Earth

Anybody can learn them and exert a magic influence over others. You can become proficient in curing diseases and bad habits of every nature. The acquirement of these powers brings happiness and health; develops will power; gratifies ambitions; gives one the key to personal and social success, and suggests many opportunities to make money.

EXTRACTS FROM UNSOLICITED TESTIMONIALS.

**We will Forfeit \$1,000 in Gold if each
Testimonial is found other than Genuine.**

P. B. Baker, A. M., of Searcy, Ark., says.—“It is superior to anything I have ever seen on the subject, and I shall use and recommend your methods in preference to all others. I will be pleased to tell anyone what I think of it.”

A. J. Merritt, Editor of the “Western Fancier,” of Madison, Ind., writes:—“I have been practicing magnetic healing for a number of years. * * * Since receiving your course of instructions I am compelled to say they are far in advance of all others in simplicity and completeness. Everything from the beginning to the end is so plain that anyone could soon learn to be an expert hypnotist.”

M. B. Furry, 417 East Second Street, Wilmington, Del., says:—“Having received your course in Hypnotism, Personal Magnetism, Magnetic Healing, etc., March 6, 1899, I am now ready to stand for an examination, as I desire to have your diploma.”

J. A. LeCoute, Quitman, Ga., Auditor South Georgia Railway Co., writes:—“Some time ago I got your correspondence course in Hypnotism. From the first I have not made an experiment that has not been attended with more or less success. After a few trials, with increasing success, I put my first subject into a deep sleep.”

Rev. Dr. Munson, of New Castle, Del., says:—“Some time ago I secured your course of Hypnotism. I found it excellent, and it was no trouble to follow the directions. I succeeded beyond my expectations, and have no objections to your using my name in any way you choose. You may refer anyone to me for my opinion of your valuable course.”

Dr. W. H. Hammersley, Harrisburg, Pa., writes—“I have been practising medicine and surgery about seventeen years. I have devoted considerable time to nervous troubles and their treatment. Have found hypnotism in many cases the best treatment. I purchased your lessons, and they are about as near perfect as they can be made. They cover the whole field and are so plain and simple any person can learn to hypnotize in a very short time. Will gladly answer any questions which any person may desire to ask. I am not in the habit of giving testimonials, but think your course certainly deserves it.”

If at all interested don't fail to write for this great book. It is sent **Absolutely Free.** We guarantee you success, if instructions are followed. **New York Institute of Science, Dept. CE 4, 39 State Street, Rochester, N. Y.**

DO NOT SEND US ANY MONEY

COPYRIGHT

LOOK

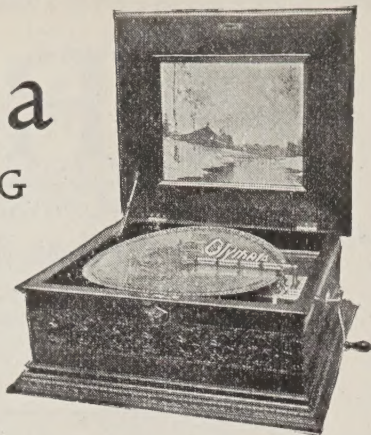
A Magnificent Solid Gold (Emerald or Ruby) finished Ring.

Send us only your name and address (**no money**). We will send you, postpaid, **10 large handsome stamped doylies**, different designs. Sell them among your friends at 10c. each. Send us the \$1, and we will send you by return mail your choice—Emerald or Ruby ring. Every ring guaranteed as advertised. Write sure today. Your success is certain. This is an honest offer made by a **reliable company.** Box 93 **Sterling Jewelry Co., Wilkes-Barre, Pa.**

FREE

Notice our Cash Prizes and Premiums on page iv.

.. The ..
Olympia
 SELF-PLAYING
Music
Box



With interchangeable Tune-Disks, is the most approved and satisfactory of Music Boxes.

EXCELS IN Richness and
 Sweetness of
 Tone, Volume of Sound, Brilliancy
 of Rendering, and Durability. . . .

Besides the pleasure which we enjoy in listening to good music, there is certainly an added charm in being able to produce it. This anyone can do with an Olympia Music Box.

Delightful Entertainments
 at Home,

comprising vocal and instrumental renderings, all within the scope of the Olympia Music Box, may be arranged at a moment's notice.

OLYMPIA MUSIC BOX CO.,

48 and 50 West 4th St., New York.

Or inquire of Dealers in Musical Instruments and Jewelers.

Agents Wanted.

Catalogue Free.



Farm Raised Poultry

Pay the buyer because they are strong, vigorous, healthy and will breed healthy stock. All FARM RAISED Poultry stock we ship is Guide explains all, and tells how to make big money with poultry. Worth \$25. Sent for only 15c. **JOHN BAUSCHER JR., Box 325, Freeport, Ill.**

Our Little Folks Magazine.

Most meritorious 24-page monthly for children up to their 'teens. It contains large and beautiful pictures, simple stories, puzzles, and a great variety of ingeniously prepared subject matter for the profit and entertainment of young readers.

The price of Little Folks' Magazine is 75 cents per year; the price of VICK'S MAGAZINE is 50 cents per year; the two \$1.25. Until further notice we will send the two for **75 cents** one year for only

Vick Publishing Co., Rochester, N. Y.

Purifine

Every Housekeeper
 should know it.

Write for circulars.

Costs about 5 cts. a gallon
 Purifies the air in the house.
 A drop in water keeps cut flowers fresh several days longer.
 It is an odorless, non-poisonous Disinfectant and Antiseptic.

FITCH CHEMICAL Co.
 Bay City, Mich.

It doesn't smell.
 Just kills other smells.

We will Pay

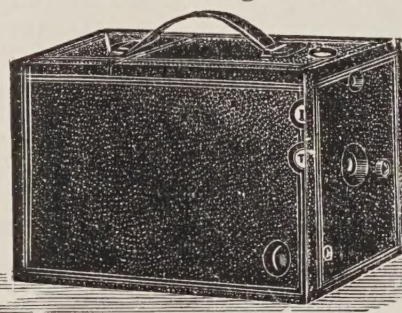
Liberal Commissions

to persons who will solicit
 subscriptions for Vick's
 Magazine. Write us. ✿ ✿

Vick Pub. Co., Rochester, N. Y.

GEM POCO CAMERA....

The GEM POCO CAMERA here offered is by no means a toy Camera, but a practical instrument of first-class manufacture embracing latest improvements of utility and efficiency. A most decided advantage is a fixed lens that is always in focus,



the use of the finders simply determining the portion or positions of view one may wish to take.

The Camera is neatly finished throughout, compactly built, and covered with fine morocco grain leather, a good leather handle, two tripod plates, and two

large brilliant oblong finders; it is equipped with a new Gem lens of great depth of focus, giving clear pictures to the very edge of plates; also a Rochester Safety Shutter, arranged for time or instantaneous exposure. Size of Camera, 4½x6x7 inches; it weighs one pound and makes a picture 4x5 inches, sharp to the edge. Each Camera is supplied with one Dry Plate Holder.

Regular price, \$5.00. We will send VICK'S MAGAZINE one year and a Gem Poco Camera for only \$3.50.

FREE We will give one of these Gem Poco Cameras to any person sending twenty subscribers to VICK'S MAGAZINE at 50 cents each—\$10.00 in cash.

VICK PUBLISHING CO., Rochester, N. Y.

**READING STAND and
 REVOLVING BOOK CASE.**

DESCRIPTION.

34 inches high; by patent extension rod can be raised to 50 inches. Oak shelves with carved oak slats make the case 15x15x12 and ample room for all reference books of daily use. The top or Dictionary Holder, 14x18 inches is large and strong enough for any volume and is adjustable to any angle or height. The base is oak 12 inches high. Between shelves 11 inches. Revolves easily.

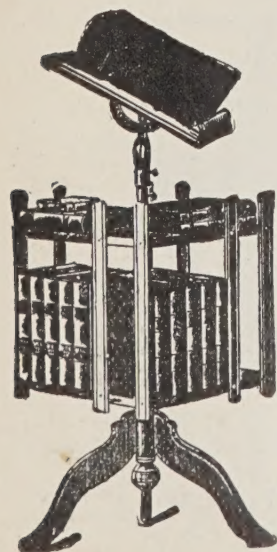
Price of Stand, \$10.00

Years subscription to Vicks Magazine,50—\$10.50

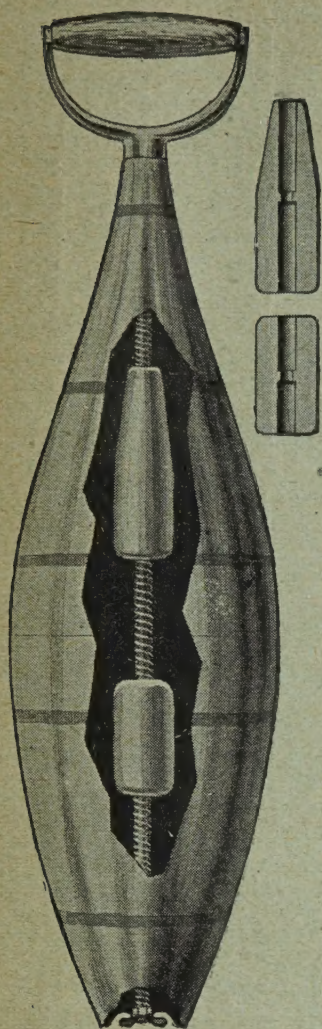
For only \$3.00 we will send VICK'S MAGAZINE one year and deliver one of the Revolving Stands packed and wrapped in strong paper, weight 20 lbs., at express or freight office in Chicago. When ordering give name of your express or freight office.

FREE We will give one of these stands free to any person sending twenty names to VICK'S MAGAZINE, at 50 cents each, \$10.00.

Vick Publishing Company, Rochester, N. Y.



Great Strength and Development



given to the arms, shoulders, wrists, lungs and all muscles and organs of the chest, back and stomach by the use of

The Kallithenos Club

"THE CLUB WITH LIFE IN IT."

Concealed within the Club are peculiarly constructed weights, shifting on a polished metal rod, which are kept in position by steel springs and impart a surprising life-like movement.

The use of the **KALLITHENOS CLUB** not only develops great strength and increases the size of the muscles, but it also creates wonderful quickness and control of both muscle and brain, thus enabling the body to overcome any sudden emergency requiring quick action.

It takes off unhealthy flesh. It puts on solid tissue.

It wears out "fat" and substitutes muscles.

It imparts life, liveness, energy, self-control of both body and brain.

Doctors commend it highly for weak, contracted lungs.

ONLY ONE CLUB IS USED. The shell, or body, is made of aluminum. With each club are furnished two handles—"spade" and straight—three nickel plated weights, four spiral steel springs. These are all interchangeable, rendering the **Kallithenos Club** adaptable to any person, weak or strong, man, woman or child.

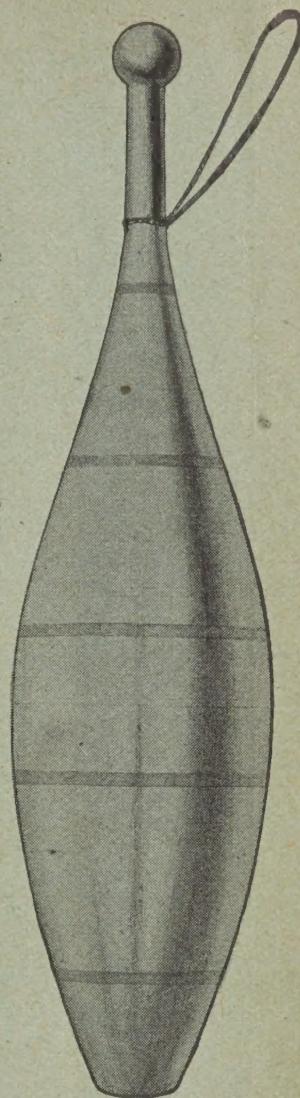
Write for illustrated circular, with price and introductory offers.

The Kallithenos Co.,

Dept. E. 71 Eagle St.

BUFFALO, N. Y.

A Few Good Agents will be appointed.



DO NOT SEND US ANY MONEY.



LOOK

This **Magnificent Solid Gold-plated Bracelet**, with your **initial engraved on free**. Don't send any money—just your name and address. We will send you postpaid 10 Large, Handsome Stamped Doylies; different designs. Sell them to your friends at 10 cents each. Send us the \$1.00 and we will send you by return mail your handsome initialed Bracelet.

Address **STERLING JEWELRY CO., Wilkes-Barre, Pa.**

FREE

Box 93

The CRITERION SELF-PLAYING MUSIC BOX

\$ **6**.00
and upward

Is the latest and most approved of all the Music Boxes with Interchangeable Tune-Disks.

The Piano cannot produce the richness attained by the Criterion unless played by six or eight hands, and then the players must be experts. It is superior to every other make in tone and simplicity of construction. The durability you'll appreciate years from now, after inferior makes would have been worn out and useless. Disks are easily changed—they're practically indestructible.

Charming Home Entertainments may be arranged without notice if a Criterion is in the parlor—dancing, singing, instrumental renderings—hymns and church music, too.

Insist on a Criterion....
There is no "Just as Good"

Catalogue
Free....

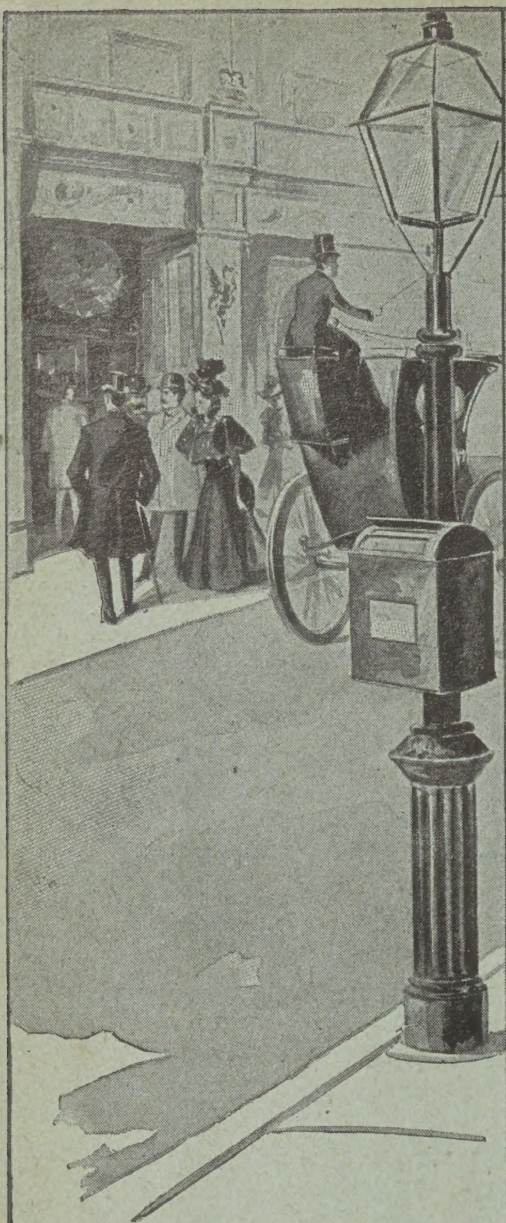


Sent on Trial... on receipt of price. We will send the Criterion on 10 days' trial. You can return it and get your money back if not entirely satisfied. Write

M. J. PAILLARD & Co. 680 Broadway, New York

Or inquire of Dealers in Musical Instruments and Jewelers.

AGENTS WANTED



DUNHAM'S COCOANUT



**DELICIOUS
DESSERTS.**

Perfectly Digestible

10 CENT PACKAGES.

